



University of Pennsylvania
ScholarlyCommons


Master of Applied Positive Psychology (MAPP) Capstone Projects Master of Applied Positive Psychology (MAPP) Capstones

7-2020

Memento Mori: Reflecting on Mortality to Inspire Vitality and Meaning in Life

Jodi Wellman

Follow this and additional works at: https://repository.upenn.edu/mapp_capstone

 Part of the [Other Psychology Commons](#)

Wellman, Jodi, "Memento Mori: Reflecting on Mortality to Inspire Vitality and Meaning in Life" (2020).
Master of Applied Positive Psychology (MAPP) Capstone Projects. 181.
https://repository.upenn.edu/mapp_capstone/181

This paper is posted at ScholarlyCommons. https://repository.upenn.edu/mapp_capstone/181
For more information, please contact repository@pobox.upenn.edu.

Memento Mori: Reflecting on Mortality to Inspire Vitality and Meaning in Life

Abstract

The practice of *memento mori*—acting on the Latin phrase that translates to “remember we must die,” has the profound potential to wake us up and breathe more life into our lives. While focusing on the end of our days may sound more morbid than meaningful, the contemplation of death allows us to appreciate the scarcity of the very time we’re looking to make the most of. In a world consumed with expanding the *length* of our lives, cultivating a more intimate familiarity with death can help us expand the metaphoric *width* and *depth* of our lives as well. We make our lives wider when we fill them with vitality and gusto—expanding the breadth of the pleasurable experiences that life has to offer while blasting us out of our autopilot tendencies. We make our lives deeper when we infuse them with meaning and purpose—elevating ourselves out of empty or mundane existences into lives that feel like they matter. This capstone explores how the field of positive psychology, with its dialectical appreciation of the positive *and* negative phenomena in life, is uniquely poised to explore the traditionally taboo topic of death. With the heft of all its theory, research, and practice, existential positive psychology encourages us to courageously confront death to live with more meaning and vitality... to pursue lives truly worth living.

Keywords

existential positive psychology, vitality, meaning, positive death, death awareness, mortality salience, temporal scarcity, terror management theory

Disciplines

Other Psychology

Memento Mori: Reflecting on Mortality to Inspire Vitality and Meaning in Life

Jodi Wellman

University of Pennsylvania

A Capstone Project Submitted

In Partial Fulfillment of the Requirements for the Degree of

Master of Applied Positive Psychology

Advisor: Jan Stanley

August 1, 2020

Memento Mori: Reflecting on Mortality to Inspire Vitality and Meaning in Life
Jodi Wellman
jodiswellman@gmail.com

Capstone Project
Master of Applied Positive Psychology
University of Pennsylvania
Advisor: Jan Stanley
August 1, 2020

Abstract

The practice of *memento mori*— acting on the Latin phrase that translates to “remember we must die,” has the profound potential to wake us up and breathe more life into our lives. While focusing on the end of our days may sound more morbid than meaningful, the contemplation of death allows us to appreciate the scarcity of the very time we’re looking to make the most of. In a world consumed with expanding the *length* of our lives, cultivating a more intimate familiarity with death can help us expand the metaphoric *width* and *depth* of our lives as well. We make our lives wider when we fill them with vitality and gusto— expanding the breadth of the pleasurable experiences that life has to offer while blasting us out of our autopilot tendencies. We make our lives deeper when we infuse them with meaning and purpose— elevating ourselves out of empty or mundane existences into lives that feel like they matter. This capstone explores how the field of positive psychology, with its dialectical appreciation of the positive *and* negative phenomena in life, is uniquely poised to explore the traditionally taboo topic of death. With the heft of all its theory, research, and practice, existential positive psychology encourages us to courageously confront death to live with more meaning and vitality... to pursue lives truly worth living.

Keywords: existential positive psychology, vitality, meaning, positive death, death awareness, mortality salience, temporal scarcity, terror management theory

Table of Contents

Table of Contents	3
<i>Acknowledgments</i>	5
<i>The Preamble</i>	5
<i>Introduction</i>	8
<i>History</i>	11
A Brief Introduction to The Ending of Life	11
Theology	13
Philosophy	15
The Arts + Humanities	19
Death Scholarship	25
Death in Today's Society	27
<i>How We Think (Or Avoid Thinking) About Death</i>	29
Denial as a Default Setting	30
Terror Management Theory	34
Mortality Salience	35
Meaning Management Theory	39
Ontological Confrontation	40
Brushes with Death	45
<i>Our Perceptions of Time: Life is Short (or is it Long?), and then We Die</i>	49
Temporal Scarcity	49
Socioemotional Selectivity Theory	52

Construal Level Theory	53
<i>Motivators and Regrets About Life and Death</i>	54
Mortality Motivation.....	54
Self-Realization Theories.....	58
Regrets	59
<i>Positive Psychology’s Role in Using Death to Bring Us Back to (More) Life</i>	63
Living the Good Life	63
The Positive Psychology “2.0” Perspective: Infusion of the Dark Side	67
A Brief but Important Clarification of What This Memento Mori Discussion <i>Isn’t</i>	71
The “Astonishingly Alive” Model	73
<i>Living Life to Its WIDEST: When We Find Ourselves Yearning for More</i>	74
Vitality: Maximal Aliveness and Living Like We Mean It	75
Habits: The Blunting of Our Aliveness	79
Boredom: The Further Blunting of Our Aliveness	81
Novelty.....	83
<i>Living Life to Its DEEPEST: Making Meaning out of Memento Mori</i>	85
Meaning	85
Vital Engagement.....	90
Gratitude + Appreciation	93
<i>Existential Psychology + Psychotherapy Perspectives on Memento Mori</i>	95
<i>In Conclusion: A Few Dying Words</i>	100
References	102

Acknowledgments

Thank you to Jan Stanley, my capstone advisor– whose warm embrace of death is way less weird than mine. I am so very grateful for her encouragement, wisdom, and inspiration.

Thank you to The Husband– who all this living wider and deeper is really for. I simply cannot wait to grow old and die with him, after living squander-free lives we'll hopefully be able to remember from our retirement home.

And I'd be remiss if I didn't thank the Grim Reaper– who plays it cool yet lurks in my shadows. I see him there, the inspiring stalker that he is. He makes me live my life so much better... not in spite of him, but because of him.

The Preamble

I keep a tarnished coin close by with the sole purpose of reminding me that I'm going to be dead soon. I say those exact words, too, every time I stumble across the coin, whether it's in my top left desk drawer, in the little pocket of my purse where I keep my lipstick, or on the front table where we keep the keys. *"I'm going to be dead soon,"* I solemnly whisper while touching the coin. It's a tad dramatic. To further alarm you, if that's even possible, the coin has a rather ominous-looking skeleton engraved beside the Latin term *"memento mori,"* which translates to the most profoundly motivating words that have blown the doors of my life wide open: *remember you must die.*

Lest you worry about my health, rest assured that I am perfectly healthy (enough). Lest you worry about my psychological health, what with this seemingly morbid fascination with death, please rest equally assured that I have a vast majority of my marbles. I'm quite simply hell-bent on helping people live lives, as Mark Twain eloquently said better than I ever could,

“...so that when we come to die even the undertaker will be sorry”. Reminding myself of my inevitable, no-way-out-alive, possibly imminent (but hopefully not) *death*— well, that snaps me to attention. That puts a spotlight on the life I’m living and makes me question if it’s worth dying for. Death motivates me to live, but not out of fear. Knowing I’ll be dead soon(ish) sparks an intense desire to do this life justice and get to the end of my days without a whiff of regret. (*I have 1,966 Friday nights left, if I lead an average life that doesn’t involve getting hit by a bus. How can I make the most of them, and not feel hungover on 1,966 Saturday mornings?*).

Should we talk a little more about regrets, those pesky things? Should we talk about the fear I believe we all share, that we just might get to the end of our days with an unrelenting suspicion of *what could have been*? That we might not live up to what we deeply and sometimes-secretly see as our Potential (*yes, with a capital P*)? That we might regret letting precious but difficult relationships languish? That we worked So. Many. Damned. Weekends, didn’t see the Swiss Alps, didn’t go for that colonoscopy, didn’t say “I love you”—and possibly even more heart-wrenchingly—that we didn’t say “I’m sorry”?

So with a kind of cheeky defiance, I dare us to take the bold steps of looking death in the eye (*or maybe just its distant shadow*)— from the safety and comfort of a workshop/ retreat/ keynote/ experience that I feel called to facilitate as a way to follow through on what is best described as my mission in life. Helping people enjoy their lives while they are above ground— by creatively playing with the harsh reality that it’s just a matter of time that we’re below ground—connects me to a cause so deep that I can’t not share it with others. Poking and prodding at the absurdity of it all, the mystery of this shared human experience of racing towards the inevitable finish that we too-often avoid talking about, and getting us to maybe make even one small change in how we’re doing this thing called living to escape the disenchantment of

regret— that gives me a sense of meaning that just might ignite meaning for others along the way. I want us to pay fierce attention to our dreams and hopes— to care for them, nurture them, honor them. I want to help us live with maximal aliveness in stark juxtaposition to the finality of death. I want us to embrace this poignant line by Hunter Thompson (*which I'd get tattooed somewhere on myself if it wasn't so long*):

Life should not be a journey to the grave with the intention of arriving safely in a pretty and well preserved body, but rather to skid in broadside in a cloud of smoke, thoroughly used up, totally worn out, and loudly proclaiming “Wow! What a ride!” (Thompson, 1997, page unknown).

We want the ride, please and thanks. I want us to die happy. I want us to live lives remarkably free of regret, just as tarnished as my memento mori coin: worn, beautifully weathered, valued, and *fully spent*.

Introduction

*“Death twitches my ear;
'Live,' he says...
'I'm coming.’”
-Virgil*

“Come to terms with death. Thereafter anything is possible.” – Albert Camus

*“Man... lives as if he is never going to die, and then dies having never really lived.” – Dalai
Lama*

We’re all going to die and we all know it.

A poor soul dies in the U.S. every 12 seconds or so (Xu, Murphy, Kochanek, & Arias, 2020) and we’re all just doing our best to hope we’re not one of them.

Our lives are culminating towards the utmost finality of all– the rite of passage known as death– and we’re working with diligence to avoid the topic altogether. If you are still reading this paper, you’re unique in that most people dodge death with a carnal instinct (Becker, 1973).

Death is the wildly unpopular yet ominously present inevitability, even though it’s the very thing that might help us live like we mean it.

As humans we’re uniquely burdened by our awareness of our own mortality (Solomon, Greenberg, & Pyszczynski, 2015). We’re just smart enough to know what we don’t know, and reflective enough to send ourselves into potentially existential tailspins. Our beliefs and attitudes about death, however, profoundly impact our well-being and the ways in which we live our lives (Wong & Tomer, 2011). Contemplating death allows for so much more than a reflection of the end; it provides an opportunity to lead intentional lives in the specter of death (Singh, 2016).

What do we have to gain by ushering death into our daily lives, rather than avoiding it or meeting it at the end? In a world consumed with expanding the *length* of our lives, cultivating a

more intimate familiarity with death can help us expand the metaphoric *width* and *depth* of our lives as well. We make life wider when we stuff it full of vitality and gusto—expanding the breadth of the pleasurable experiences that life has to offer. We make life deeper when we infuse it with meaning and purpose that elevates us out of the doldrums of emptiness.

Living our lives with more vitality takes us out of the autopilot mode that can be pseudo-satisfyingly efficient, but also flatteningly dull, boring, uninspired, lifeless... *all sorts of words we don't want to use to describe our lives*. We get caught up in routines that in many ways make our lives easier (*driving the same route to work each day, completing the same TPS reports*), but these routines don't always make us feel vitally *alive*, do they? The lukewarm, mediocre experiences of life might not make us feel like we're dead, either... but we know we can do better than living a slumbering existence.

Living lives that are void of meaning feels just as troublesome as lives that are seemingly stale. A dearth of meaning feels shallow, hollow, disconnected, unfulfilled... *descriptions we'd likely not like read about us at our funerals*. Widening our lives isn't enough for an optimal living experience— we can fill our time with pleasurable experiences and still feel empty inside. Our quest for meaningful depth in life is a natural human tendency that's an essential ingredient in the recipe for a life well lived (Baumeister, Vohs, Aaker, & Garbinksy, 2013).

The practice of *memento mori*— acting on the Latin phrase that translates to “remember we must die,” can paradoxically wake us up and breathe life into our lives. Reflecting on death can act as jumper cables to reinvigorate our lives with vitality and meaning—creating the perspective we need to fully participate in our lives with urgency, priority and meaning (Yalom, 1980). While “remembering we must die” might be viewed as macabre, this exercise has less to do with the morbid aspects about death and so much more to do with the profound opportunity to

celebrate and focus on life. The memento mori call here is intended to trigger an agentic, active prospecting process (Seligman et al., 2013) to thoughtfully edit our lives, rather than having to encounter the wake-up call of a near-death experience, which what it usually takes for us to snap to attention and start living on purpose (Groth-Marnat & Summers, 1998). Memento mori allows us to peer at death from a safe distance and initiate positive change; we don't have to emerge from a coma to find meaning and a distinct sense of aliveness in our lives.

If you join me on this 101-page journey, we'll dig up the proverbial grave of death—delving into the spellbinding history, theories and ways of relating to the thing we fear most (yes, even more than public speaking; Dwyer & Davidson, 2012). We'll then usher positive psychology into the discussion to defang death and provide the scientific architecture for expanding the width and depth of our lives. We'll explore living with vitality in the lives we have yet to live—clearly the width part. This will give way to plunge the depths of how meaning and appreciation can arise from the realization that our existence is precious and fleeting.

Can looking at death through the lens of positive psychology bring us back to life? Read on and find out. It won't kill you.

History

A Brief Introduction to The Ending of Life

Death has a long and sordid history, as one might expect. Perennially perplexing, it's a theme that is interwoven across fields of study: the humanities, social sciences, the scientific community and even technology have contributed the study of death (Van Brussel & Carpentier, 2014). Our ways of dealing with death have changed substantially over our course of human history (Aries, 1975), and it's fair to say that cultural frameworks largely shape our attitudes about the end (Greenberg, Koole, & Pyszczynski, 2004). Penfold-Mounce (2019) sees death as an opening for creative, productive, perspective into our lives, communities and identities— a window into broader social issues.

Death has shifted from a social phenomenon that once brought communities together through collective rituals (Ariés, 2000) to an individualized, privatized, medicalized event that has cleaned the messiness of death up and hidden it from plain view (Mellor & Shilling, 1993). Whereas death was once familiar and quite literally out in the open— wakes were held in home parlors up until the end of the 19th century, at which point death became professionalized and corpses were swiftly escorted to hospitals or funeral parlors (and consequently parlors were given the ultimate home makeover, ingeniously re-branded as *living rooms*; Quigley, 2005). Out of sight, death became seen as a physical malfunction or a medical letdown that is anything but a social reality (Fonseca & Testoni, 2012). The medical, scientific and technology fields have done wonders for extending our life spans, yet our discomfort with death appears to have grown in direct proportion with our ability to push it off. We're living in an age where, thanks to these modern-day advancements, the topic of *immortality* is far more appetizing than a hearty discussion about mortality. The longer we're living as a species, the less likely we are to deign to

discuss something as offensive as death (Wong & Tomer, 2011). This sanitization has left us floundering in the face of something so natural; we're often woefully unprepared to handle the distasteful act dying, let alone the finitude of death.

We'll explore cultural frameworks below, delving into theology, philosophy and academic interest in death over the history of humanity.

Theology

"Let us eat and drink, for tomorrow we die" – Isaiah 22:13

Our feelings about death are often shaped by our beliefs. Religious doctrines provide counsel on how to live lives that ensure redemption and access to what their faiths promise upon death (Parkes, Laungani, & Young, 2015)– whether it's the eternal heaven or hell outcome that the Christian faith prophesizes, the reincarnation-until-enlightenment scenario that Hinduism postulates, the Buddhist promise of Nirvana, the aboriginal version of the afterlife known as the *nightlife* (Bregman, 2010), or the Taoist tradition of reverting back into a state of non-being. When the afterlife stakes are eternal, people tend to take notice and adhere to the belief structures that grant them entry to their promised land– like salvation through belief in Christ, submitting to the will of God for Islamists, living in accordance with the Tao, or obeying Jehovah's laws (Obayashi, 1992).

Eastern religions and philosophies, traditionally more open about the topic of death, have connected death and contemplation for ages; the Vedic texts in India have woven in themes of death reflection (Singh, 2016), and Buddhists– believing that death is the key to the mystery of life– extol the virtues of mindfully meditating on the thought of *maranam bhavissati*, meaning "death will take place" (Gunaratna, 1982). The country of Bhutan, nestled deep into the Himalayas, has been measuring their Gross National Happiness levels since 2006 with over 90 percent of its residents reporting being happy, to one extent or another (McCarthy, 2018). Following the Buddhist tradition, many Bhutanese people practice their death meditation five times each day (Bond, 1980).

While an abundance of literature is available on the associations between religion and death attitudes, it is limited in that a majority of studies focus on the dark side of death fears and anxiety, without assessing the more positive reactions and possibilities associated with death acceptance (Dezutter, Luyckx, & Hutsebaut, 2009). Religion has been shown to both alleviate *and* exacerbate fears of death (Bassett & Bussard, 2018); religion can facilitate the belief and hope of immortality through the portal of an afterlife or alternate plane of existence, yet can also trigger incremental anxiety for those who fear they aren't living up to the expectations of an unforgiving doctrine or God (Bassett & Bussard, 2018).

Our contemporary age has shifted our reliance on religion to provide divine death interventions; as of the 19th century, the workings of the world could be explained through the marvels of science and technology, making gods less relevant to societies more apt to accept biological approaches to life and death (Lifton, 1975).

Philosophy

“Everything has been figured out, except how to live.” – Jean-Paul Sartre

“Death is the worm at the core of all our usual springs of delight” – William James

Philosophical ideologies over the centuries have informed the age-old questions of, *“what really happens when I die?”* and *“is death a bad thing?”*, which inevitably leads to the perennial philosophical gem of, *“who am I?”* (Kagan, 2012).

Philosophy, as they say, “was conceived as wedded to death” (Singh, 2016, p. IX). Legions of A-list existential thinkers have tried to “dress the wound of mortality” (Yalom, 2008, p. 11) by making sense of the absurdity and fragility of life; Nietzsche, Kierkegaard, Camus... a veritable who’s who list of intellectuals have weighed in on the infinite conundrum. Some describe death as a rich and verdant afterlife– for which we must prepare, as noted in the religious context– to a total annihilation of the self (Luper, 2009). Philosophers have either regarded death as real (picture a blank wall) or not real (picture a door to another life; Mason, 2015).

Zhuangzi, the ancient 4th century BC Chinese philosopher, pronounced that death was just another ritual to be celebrated– like a going away party for a grand journey to another phase of existence (Elder, 2014).

Socrates believed that death led to *either* the blank wall of a dreamless sleep, or the door opening to a passage to yet another life– fear being pointless, regardless of the door that death opened for us (Obayashi, 1992). Ever the controversial sort, Socrates professed that death would be a benefit for those who kept their minds sharp.

Plato, Socrates's reverential student, believed death opened up the door to an ideal world (Rowett, 2018), adding in his two cents here: "*I am afraid that other people do not realize that the one aim of those who practice philosophy in the proper manner is to practice for dying and death*" (Phaedo, 64a3-4). These Ancient Greeks launched the ethos that death provided the liberation of one's intellectually trained soul from its somatic prison (Obayashi, 1992).

Epicurus (whom Yalom [2008] posthumously anointed as the first proto-existential psychotherapist) took a cut-and-dried approach to the topic, believing that death was simply the cessation of sensation— therefore inconsequential and of no concern. He proclaimed that our fear of death was the one thing holding us back from living lives of fulfillment and that we owed it to ourselves to seek as much sensation as possible, living up our moments while alive (Mitsis, 2012), before hitting the proverbial blank wall.

The Stoic school of philosophy that emerged in 3rd century Greece argued that without heaven or hell, the time to perfect our virtues and live life to the fullest is *today*— by meditating on our mortality as a reminder that tomorrow just might not arrive (Lachs, 2005). Roman emperor and Stoic philosopher Marcus Aurelius (2002) summed it up well: "You could leave life right now. Let that determine what you do and say and think" (p. 20). Aurelius (2002) also quipped, "Alexander the Great and his mule driver both died and the same thing happened to both" (p. 74).

Sixteenth century French philosopher Michel de Montaigne wrote extensively about the difference between being melancholic and meditative about death, urging the plain and simple premeditation of death as a way to learn how to die: "To begin depriving death of its greatest advantage over us, let us deprive death of its strangeness, let us frequent it, let us get used to it; let us have nothing more often in mind than death" (De Montaigne, 2018, p. 93).

German philosopher Arthur Schopenhauer ushered Hindu and Buddhist teachings into Western philosophy in the mid-1800s, espousing a grander view of the universe while considering death, rather than staying mired in the small-minded fears of our individual fates (Singh, 2016). Schopenhauer had an enduring focus on the contemplation on death in his work, considering death as our destiny fulfilled amidst a “will to live” (Choron, 1963).

Nietzsche (1896), famous for encouraging us to consummate our lives, proposed the stirring thought experiment of the “eternal return,” asking readers to conceive of having to live their identical lives over and over again, for eternity— every high, every low, every mundane moment relived. Obvious implications abound: would we want to live *this* life again? Nietzsche (1896) noted that our response to this question would either delight us, change us, or crush us.

Martin Heidegger, 20th century German philosopher, espoused that his notion of *Dasein*— the capacity to conceive of our own death— was essential in the act of being an authentic, existentially-healthy being. Freedom, in all its glory, was to be gained by the acceptance of our death, leading us to a *being-towards-death* mindset or way of being, squarely rooted in the foresight of the end of it all (White & Ralkowski, 2005).

Twentieth century French philosopher Jean-Paul Sartre saw death as a reflection of our meaningless existence: “life has no meaning the moment you lose the illusion of being eternal” (1943/1984, p. 191).

Perhaps Otto Rank, the first existential therapist, said it best: “some refuse the loan of life to avoid the debt of death” (Yalom, 2008, p. 108).

For every word of self-annihilating insight the philosophical greats have bestowed upon us about death, just as many encouraging sentiments have been offered about how to make the most of the time we have been allotted. Humans have been concerned with not just making sense

of death, but of making sense of *life*, too— consistently interested in ways to live our years to their fullest.

Roman philosopher Seneca graced us 2,000 years ago with words of wisdom on the value of time and the need to live lives as wide as they are long: “The whole future lies in uncertainty: live immediately ... life is long if you know how to use it” (Seneca, trans. 1997, p.2). Seneca goes so far as to say that we’re essentially dying prematurely by living like we’re destined to be here forever.

Horace, the dutiful Epicurean, will be forever cherished for his slogan-friendly encouragement to “*carpe diem*”— seize the day— given that there might not be a tomorrow (Horace, 23BC).

The Arts + Humanities

*“Birth, and copulation, and death.
That’s all the facts when you come to brass tacks;
Birth, and copulation, and death.”*
–T. S. Eliot. *Sweeney Agonistes* (1932)

Death has proven to be a powerful and consistent muse for creative minds across the centuries. Simultaneously reflecting and defining the culture of the time, the ways in which death has been portrayed through art allows a glimpse into the views on the subject across human history (Townsend, 2008).

The plague (or black death) in the mid 1300s provided macabre fodder for the artwork of its time, mirroring the medieval culture’s fear of death, destruction and hell (Williams, 1990). Artwork at that time took a very literal approach to the representation of what people feared the most at that time, as death bed scenes were commonly painted and prized (Pacholski, 1986); some believe that these images were instructive, helping people understand how to die (Llewellyn, 2013). It was during this era that the grim reaper first emerged: adorned in a dark robe with scythe in skeletal hand, he showed up in many figurative paintings to serve as a visual memento mori (Bennett-Carpenter, 2017).

In a world before photography, artists were often commissioned to capture the images of the dead, so corpses were found painted on canvases from the Middle Ages through the Renaissance. Skeletons symbolically represented the triumph of death (Quigley, 2005).

Danse Macabre, or dance of death, became a popular genre of artwork in the late middle ages that furthered mortal contemplation. Murals portrayed individuals from all walks of life dancing their way– in tandem with their corpses and skeletons– towards their graves. These

borderline-amusing personifications of death highlighted the didactic nature of art that sought to teach people how to live; the message was clear to be aware of death, that no one escapes the inevitable, and that enjoyment could be found hamming it up in a last dance at life (Walter, 2019). See Figure 1 for details.

Figure 1

The Dance of Death (1493) by Michael Wolgemut, from the Nuremberg Chronicle of Hartmann Schedel.



Vanitas—symbolic works of funerary art that were ripe with allegory— took the medieval art world by storm. Still life vanitas paintings, for example, depicted tables adorned with skulls, hourglasses, watches, rotting flowers and bubbles to not-so-subtly hint at the finality and fragility of life while eschewing excess vanity and materialism (Walter, 2019). See Figure 2 for details.

Figure 2

Vanitas- Still Life with Bouquet and Skull (1642) by Adriaen van Utrecht.



Contemporary artists are no less fascinated by death. Skull imagery abounds, from Vincent van Gogh's brash "Skull with Burning Cigarette" (see Figure 3) to Cézanne and Picasso's surrealist skull versions (Walter, 2019) to modern-day artist Ron Mueck, for example, who aggrandized the traditional symbol of death by creating installations of one hundred stacked five-foot high life-like skulls in *Mass*, his not-so-subtle study of mortality (Stewart, 2017; see Figure 4). Damien Hirst earned £50 million in 2007 for creating *For the Love of God* (see Figure 5)—a platinum skull encrusted with more than 8,601 diamonds (Skelly, 2014).

Figure 3

Head of a skeleton with a burning cigarette (1885-86) by Vincent van Gogh.

**Figure 4**

Mass (2017) by Ron Mueck. Photo: Sean Fennessey.



Figure 5

For the Love of God (2007) by Damien Hirst; retrieved from <http://www.damienhirst.com/for-the-love-of-god>



Literature has included themes of death since people began writing and reading; four thousand years ago, *The Epic of Gilgamesh* told the tale of a hero's journey to determine how he must live in light of his friend's— and ultimately his own— death (Smith, 2017). *Ars moriendi*

(“The Art of Dying”), a seminal text in death lore whose authors are unknown, advised readers in the mid 1400s how to die a good death— an appropriate cultural response in the aftermath of the plague (Ariés, 2000). Readers were encouraged to diligently follow the guide’s instructions to ensure soul salvation; the first chapter in the illustrated book helpfully addressed the topic of avoiding eternal damnation.

Modern-day writers have written volumes about the big sleep. Dante gave us symbols of hell in his classic *Inferno* (Alighieri, 1935), Dylan Thomas advised us to “not go gentle into that good night...” and Hamlet famously shuffled off his mortal coil (Shakespeare, 1599/1992). *Zorba the Greek* counselled us to “leave death nothing but a burned out castle” (Kazantzakis, 1952). Leo Tolstoy wrote *The Death of Ivan Ilych* (1981)— a fictional focus on the liberation of death— in the aftermath of an existential crisis. Emily Dickinson had such a preoccupation with death that she wrote it into more than a quarter of her poems: “...Death is the supple Suitor/ That wins at last...” (Daghamin, 2017, p. 152). Author and playwright William Saroyan captured a sentiment many of us share, near his own death that “everybody has to die, but I always hoped an exception might be made in my case” (Smith, 1981), and E.M. Forster wisely penned in what eloquently captures the point of our discussion here today, that "Death destroys a man, but the idea of death saves him" (1921, p.371).

Death Scholarship

“It’s only when we truly know and understand that we have a limited time on earth – and that we have no way of knowing when our time is up – that we will begin to live each day to the fullest, as if it was the only one we had.” –Elisabeth Kubler-Ross

Academic interest in death had been dormant in the second half of the 20th century following Freud’s then-contentious notion of Thanatos, known as the death drive– that we hold unconscious desires to die, or “pressure towards death,” which are fortuitously overridden by life instincts, known as Eros (Freud, 1922). Freud noted that we’re convinced of our own immortality with “an unmistakable tendency to hush it up” (1918, p. 32), and that fears of death are merely indicators of more pressing problems.

Freud (1915/1961) stated that we recognize death in others but not ourselves– but little else was said about existential anxiety (Slavin, 2016) until Herman Feifel brought death to life, so to speak, with the publication of *The Meaning of Death* (1959)– the seminal text that earned him acclaim as the “founder of modern death psychology” (Corless, 2003). “The democracy of death encompasses us all,” wrote Feifel, addressing our penchant for denying the idea of mortality, “even before its actual arrival, it is an absent presence. To deny or ignore it distorts life’s pattern.... In gaining an awareness of death, we sharpen and intensify our awareness of life” (1959, p. 123).

Feifel’s dialogue about death helped shape the field of thanatology– the scientific study of death. This contemporary philosophy has alternately and cleverly been defined as “the study of life, with death left in” (Kastenbaum, 2003, p. 87). (Interestingly, *shiseigaku* is the Japanese word for thanatology, which translates to the study of life and death; DeSpelder, & Strickland, 2013). Encouraging death to be viewed as a *part* of life rather than as an *end* to it, this interdisciplinary field of study encompasses death, dying and grief (Fonseca & Testoni, 2012).

Thought leaders within philosophy and psychology have agreed over the years that mortality acts as a foundational, structural component of human life (Carel, 2006). Robert Kastenbaum, one of said thought leaders, believed “we wouldn’t get very far in understanding life if we kept ignoring death” (2003, p. 76).

Sociologist Geoffrey Gorer admonished a society that made death invisible in his *Pornography of Death* (1955), hypothesizing that a thwarted attraction with death would lead to very bad things—like violent and graphic imagery of death in the media.

Elisabeth Kubler-Ross gave us the five stages of grief in her popular *On Death and Dying* in 1969; understanding the psychological reactions to death helped bring more open conversations about death into people’s living rooms. Her work paved the way for a more humanistic approach to death and dying (Fonseca & Testoni, 2012), timed well with the introduction of the hospice movement that sought to create a more quality-filled end-of-life experience (Doka, 2013). Death education was becoming more prevalent.

Professional journals on the topics of death and dying began cropping up in the 1970s, with a substantial body of research addressing the topic of death attitudes in addition to the ubiquitous bereavement and grief topics (Wittkowski, J., Doka, K. J., Neimeyer, R. A., & Valleria, M. (2015). Death studies appear to have a growing global interest, given a three-fold increase in international publications on the topic since 1992 (Doka, Neimeyer, Wittkowski, Valleria, & Currelley, 2016).

Death in Today's Society

Death is in the midst of a trendy surge of interest, made evident by a proliferation of death salons and cafes (gatherings of morbidly curious individuals), the advent of death doulas available for hire near the end of life, the wildly popular “Ask a Mortician” YouTube channel with over 103 million video views of topics like “*Managing Corpses After a Natural Disaster*” and “*Mortuary Makeup for Difficult Bodies*” (Hayakasi, 2013), and the WeCroak app that conveniently texts you “*don’t forget, you’re going to die*” five times each day (Leland, 2018).

The death-related travel phenomenon known as dark tourism (Lennon & Continuum, 2002) highlights our voyeuristic fascination with death. We travel to far-flung places to visit macabre attractions ranging from the harrowing—like Holocaust sites, World War battlefields, and 9/11 memorials, to the more entertaining—like taking Jack the Ripper walking tours and visiting Elvis Presley’s gravesite (along with 60,000 other fans each year; Simpson, 2019). Experiencing cultural representations of *significant others’* deaths—people with any level of notoriety—helps mediate our own relationship with mortality (Stone, 2012). With death packaged as infotainment for popular consumption, these *mortality moments* let us informally contemplate our own death.

While death is somewhat trending, *dying* remains unpopular. The field of gerontology has found itself overwhelmed with an aging population and underwhelmed with medical school students interested in working with end of life issues. The number of certified geriatricians dipped 25 percent between 1996 and 2010, while applications to fields like plastic surgery are soaring (Gawande, 2014); we’re apparently more interested in beautifying the living than working alongside the dying.

In a Western society where death has been shushed, sanitized, and medicalized (Proulx & Heine, 2006), and where Gawandel (2014) laments the “experiment of making mortality a medical transaction instead of a natural experience” (p. 14), our interest has been piqued and we’re getting curious about death from a safe place to learn more. But we should be clear about the current sentiment on death while we seek to learn about it: it’s intriguing precisely because it’s forbidden topic. People visit death cafes because they are both intrigued and panicked by the idea of death, not because they are blasé about it. Lifton (1975) highlighted that a historical shift occurred from post-Victorian societies that were significantly sexually repressed and generally open towards death, to a reversal in our now contemporary times that find us open about sexuality and repressed about the trials and tribulations of death. Let’s discuss this repression in further detail.

How We Think (Or Avoid Thinking) About Death

Tillich (1952), the existentialist thinker, noted that the anxiety of death “is most basic, universal, and inescapable” (p. 42). Every individual grapples with an instinctive yet repressed fear of the end, which likely exists at our deepest, primary levels (Yalom, 2008).

Death isn’t always at the forefront of our minds and reasons to be anxious, but it does exist in the background. In an effort to assuage our inherent yet often unconscious anxiety, we build impressive defense mechanisms to conceive of what death means to us and how it could possibly fit into our lives. Our ego works hard to defend itself against the onslaught of anxieties brought about by the stressful subject (Tomer, 1994).

Several theoretical models help us understand how we perceive death, reflecting the existential concerns at the marrow of our human condition (Castano et al., 2011). Some theories veer towards denial and self-annihilation, some position death contemplation as a vehicle for radical transformation, and some theories see death as a threat to our ability to lead meaningful lives and reach our potential (Tomer, 1994). We will review key theories and research to better understand our natural tendencies in the face of the inevitable end in store.

Denial as a Default Setting

“We pay expensively for the taboo we affix to the subject of death” – Feifel (1969, p. 294).

No discussion about our inherent tendency to remain blissfully ignorant about death would be complete without Ernest Becker’s voice; in *The Denial of Death* (1973) he addressed some of the existential matters that contribute to our animalistic fear of death. Becker was inspired by Austrian psychologist Otto Rank, a fellow believer that the motivation for our art of living stems from our fears of death and life (Wadlington, 2012). Proulx and Heine (2006) credit Becker’s bible—for which he posthumously received a Pulitzer Prize—as one of the five most important works published on meaning within 20th century social science history.

Rather than *denying* our denial, Becker (1973) advocated that we stoically accept the limitations of being human (such as the ways we think— or choose *not* to think), the limitations of our bodies (which are destined to perish), and that we should resist the effort to stifle our natural impulsive responses to death. Becker (1973) believed that we handle the dilemma of death by devising an *immortality project* or set of beliefs that make us feel heroic and therefore in some small sliver, immortal. An immortality project could be an ardent adherence to a religious doctrine, donating money to have our name chiseled into a brick on a museum wall, or having children who will perpetuate our family name. Fear— or denial— of death, to Becker (1973), was a fundamental motivator behind why we do what we do.

Many of us fear the unpredictability of death— that we don’t precisely know *when* we will die— and some believe it is this fact that makes us fear death, not the mere inevitability of death in itself (Kagan, 2012).

Denying the idea of death, however, comes at a cost. Despite our valiant attempts to suppress thoughts of the inevitable, many experience anxiety, depression, worry and negative

emotions (Yalom, 2008); trying to quell death anxiety through avoidance ironically sets the stage for *even more* anxiety. Yalom (2008) further asserts that both conscious and unconscious worries about death, if unaddressed, threaten our well-being and our ability to show up fully for life; denial exacts the price of a compromised inner life.

The most disconcerting trouble with denying death is that death isn't afraid to make itself known— through the news of a terrorist attack, through our own health scares, in the lyrics of a popular song, or through someone we know passing away. Kagan (2012) believes it is inappropriate and irrational to ignore the facts about death, given their power to cause us to behave differently and to make more powerful choices while we are still alive. Schumacher (2010) believes that we deprive ourselves of death through fear and denial. We might allow ourselves to contemplate the death of *others*, but conveniently never contemplate our own, undermining our opportunity to reap the beneficial perspectives to be gained (Schumacher, 2010). Wong & Tomer (2011) eloquently state that death denial robs us of the chance to live most vitally.

We're in such denial of our blatant endings that we consistently purchase insufficient life insurance (Bernheim, Forni, Gokhale, & Kotlikoff, 2003), we postpone transfers of wealth between generations— even when significant tax savings are to be gained (Kopczuk & Slemrod, 2005), and just 25 percent of us have living wills in place (Novotney, 2010).

When many of us are faced with the idea of death, we intentionally *don't* think of death. Yet what happens when we *are* encouraged to think of our inevitable demises, like participants in research studies? Where does denial shape shift in those moments? When asked to describe their deathbed scenes, study participants typically envisioned the idealized scenario of dying at a mature age at home, surrounded by doting loved ones, remarkably void of pain or emotional

anguish, cognitively sharp, and passing mercifully fast (Normand, 1990). Only six percent of people anticipate pain at death, and a vast majority expect old age to be their cause of death (Kastenbaum, 2000). The discrepancy between our imagined “appropriate death” (Weisman, 1972)– the death we’d choose if lucky enough to have a choice at all– and the most realistic scenarios is woefully apparent: we will likely die in accordance to what life expectancy tables predict, *or sooner* after suffering from chronic illnesses, and likely alone or in an institution (Kastenbaum, 1995). We glorify our conceptualized deaths to protect ourselves from the inconvenient truths of how death might really unfold (Evans, Walters, & Hatch-Woodruff, 1999). It is challenging to integrate threatening yet realistic death scenarios into the scaffolding we’ve built around our identities; this “softening the blow of death” version of denial eases the burden of having to construct new realities around how we’ll live a life that might end alone, in pain, and not cognitively sharp. Even individuals who are tuned into and interested in the topic of death fail to realistically anticipate what death will look like (Kastenbaum, 1994). Apparently our desire, our *need*, to manage the discomfort associated with our ephemerality encourages comforting distortions of the future.

Researchers, eager to take the pulse of society’s attitudes towards death, have developed and validated a myriad of sophisticated instruments that ascertain our degree of *death anxiety*– a term that includes an amalgam of attitudes characterized by fear, threat, dread, unease and negative emotions associated with dying and death (Neimeyer, Moser, & Wittkowski, 2003). Most scales have been designed in a unidimensional fashion to measure our fears and anxieties of death, presumably because our attitudes *about* our attitudes towards death often reduce down to the lowest common denominator of negative emotions (Gesser, Wong, & Reker, 1988). Encouragingly, many assessments in this construct now extend beyond measuring the degree of

dread and include more acceptance-based measures of death, such as Wong, Reker, and Gesser's (1994) Death Attitude Profile- Revised, which encompasses three discernable facets of death acknowledgement: *Neutral Acceptance*, where we accept death as a reality that we neither fear nor welcome; *Approach Acceptance*, where we value death as a path to a positive afterlife; and *Escape Acceptance*, where we appreciate death as a way out of an untenable situation (like battling a terminal illness).

While adept at hiding from death, we sometimes let denial take a detour. The taboo has lifted slightly in an age of constant access to news and ubiquitous violent imagery— news stations, social media channels, and Hollywood blockbusters offer a steady stream of death imagery and carnage (Wong & Tomer, 2011). Death terrifies and intrigues us in seemingly equal measure. “*If it bleeds, it leads*”— the mantra of many a media mogul— reveals our morbid fascination with death and destruction. Counterintuitively, we don't speed by car accidents to shield our sensitive selves— we create traffic jams just to slow down and get a glimpse of what happened, indulging our gruesome curiosity about *what might happen to us one day*. This passive allowance of the macabre into our lives signals our willingness to move beyond denial and explore what death might have in store for us. Shifting from a denial of death to an acceptance of our albeit disconcerting mortality opens up possibilities to not just reduce anxiety but to redefine death as a tool to live life more vitally (Yalom, 2008).

Terror Management Theory

Terror management theory (TMT) is a prominent theory within death studies and is born out of the belief that as humans we are wired with a drive for continued existence and enduring value (George & Park, 2014). When juxtaposed against our understanding that we won't exist forever, conditions are ripe for terror and dread to potentially fill the void (Greenberg, Pyszczynski, & Solomon, 1986). We manage this disconcerting anxiety in two ways: we subscribe to a particular cultural worldview— a set of shared beliefs and values within an ingroup that provides order and meaning to us— and we also bolster our self-esteem, which is contingent on how well we believe we've adhered to the cultural worldviews we've adopted (George & Park, 2014). Terror management theory allows us to suspend the disbelief of death and buy into the notion that some valued part of us will live on forever, even after we die. We might believe that we'll literally carry on in an afterlife like heaven, symbolically seek to create a legacy through our children, or make a meaningful dent in the world in some way that will continue to exist beyond our time on earth (Burke, Martens & Faucher, 2010).

Mortality Salience

Mortality salience— the level of awareness we possess that we’re vulnerable to inevitable death (Greenberg, Pyszczynski, Solomon, Simon, & Breus, 1994)— evolved out of TMT to help conceptualize our behavior while we try to overcome our fears of mortality in the face of a deep need to stay alive (Mikulincer, & Florian, 2000). Studies consistently show that the act of pondering our demise causes us to cling more fiercely to our worldviews— whatever they might be— because they are the very constructs that help keep the terror of death at bay (Castano et al., 2011). When the idea of death is made salient, study participants “double down” on their beliefs and value behaviors that align with their worldviews, while often disparaging others for presenting views that don’t match what they believe to be true (Castano et al., 2011). Judges reminded of their mortality set an average bond of \$455 in a hypothetical prostitution case, for example, compared to an average bond of \$50 for the judges in a control group; by punishing others who violated their worldview beliefs, they reinforced their own worldviews to alleviate the tension caused by death priming (Greenberg, Solomon, & Pyszczynski, 1997). Flashing the word "death" on a computer screen to American research participants, for mere fractions of a second, turned them against an author who criticized the U.S. (Solomon, Greenberg, & Pyszczynski, 2015). Individuals interviewed in front of a funeral home had a more supportive of view charities than people who weren’t as interested in making donations interviewed a few blocks out of the range of the mortality prompt (Jonas, Schimel, Greenberg, & Pyszczynski, 2002). Subtle reminders of death— like seeing an ambulance drive by, watching someone die onscreen, or even seeing wrinkles in the mirror cause us to distance ourselves from our physicality (avoiding sex and other bodily activities that on some deep level signal that we’re so

susceptibly perishable) and we turn up the dial on our symbolic value— like making our achievements, intellect and virtues shine (Solomon, Greenberg, & Pyszczynski, 2015).

Interestingly, there are ways to buffer ourselves from the angst of mortality salience. Heightened self-esteem reduces one's worldview defense and has a protective quality against death concerns (Harmon-Jones et al., 1997), as does the feeling of being powerful (Belmi & Pfeffer, 2016). Additionally, Juhl and Routledge's (2016) research shows that people with high perceptions of meaning in life and people who define themselves as socially connected find themselves exempt from mortality salience anxieties, with no changes to their well-being (as measured by satisfaction with life and subjective vitality). Encouraging individuals to reflect on their mortality awareness with openness, mindfulness and curiosity has also been shown to have a mediating effect on the guard they put up (Boyd, Morris & Goldenberg, 2017). Experiencing mortality salience in the right context can ignite moral benefits like increasing tolerance of others and increasing one's desire to be their best self (Oren, Shani & Poria, 2019); studies show that people (predominantly women) act in more prosocial ways in the week following death prompts (Belmi & Pfeffer, 2016). Being primed with thoughts of death made study participants more likely to donate money into the future— a powerful demonstration of how inclined we are to want to leave a legacy that lets us live beyond the boundaries of our lifespans (Wade-Benzoni, Tost, Hernandez, & Larrick, 2012). Reflecting on one's own death also enhanced the levels of gratitude in study participants, as well as their appreciation of the simple pleasures in life (Frias, Watkins, Webber, & Froh, 2011).

Research also shows that the ways we navigate existential angst varies by the degree to which we need structure; people with high *personal needs for structure*— the extent that we desire clear structure and certainty— react to mortality salience with traditional TMT worldview

defenses more vehemently than those with lower personal needs for structure (Juhl & Routledge, 2010).

Activating death-related concepts increases our interest in variety and novelty— unless anxiety is activated, which then decreases our interest in what is new and exciting in favor of stability (Huang & Wyer, 2015).

Considering the death of another does not tend to induce existential anxiety in the same way that contemplating our own death does (Huang & Wyer, 2015). This is likely a reflection of what we mentally reduce death down to in others and ourselves; we interpret other people's deaths as their elimination as an object from the earth, while we remain reassured that we are still present on earth. Thinking about ourselves dying, in contrast, represents the disintegration of ourselves from the world— a more disconcerting notion that can lead to anxiety (Koestenbaum, 1972).

Cozzolino (2006) notes that the typical mortality salience manipulations subjected to research participants represent death in a subliminal, generic and abstract fashion— many steps removed from a true experience that might actually mimic a near-death experience for lab participants. An alternative to mortality salience for death priming is a practice called *death reflection*, which has been found to be a more powerful and experiential way to get people in touch with their own death (Cozzolino, 2006). Imagining oneself in the midst of an apartment fire— in vivid, graphic detail— elicits different death reactions than playing morbid word games or visiting funeral homes. The implications of *how* we are primed to think about death are weighty; research reveals that when we are exposed to our mortality as an abstract concept (as through traditional mortality salience experiments), we seek support in abstract ways— like bolstering our worldviews and religious and social affiliations. When we are exposed to our mortality in a

specific and personal fashion (via death reflection) we derive support from internal resources—like construing goals, finding ways to meet our own needs, and seeking intrinsic growth (Cozzolino, 2006). Furthering this logic, we're motivated in different ways depending on whether we've triggered our abstract (traditional mortality salience) or specific (death reflection) information processing systems; under the auspice that we take action on things that have the potential to make our goals a reality (Carver & Scheier, 1990), we act in rather constrained ways that succumb to the norms of society when prompted by the abstraction of mortality salience (like driving by the cemetery), and we act in intrinsic, self-determined (Deci & Ryan, 1985) ways when prompted by existentially specific information, like forming plans that draw on our strengths and talents to achieve the goals we want for ourselves— not what our external worldview requires of us to fit in (Cozzolino, 2006). In response to this research, the creators of TMT agreed with Cozzolino's (2006) assertion that a deeper and more personal confrontation with death would elicit positive growth, although they caution that some people do in fact react to close encounters with death with terror and withdrawal from life (Pyszczynski, Greenberg, Solomon, & Maxfield, 2006).

Conceptualizing our *ideal death* that aligns with our values and what we find meaningful (for example, being surrounded at the end by family after reaching important life goals) has been shown to diminish our need to take worldview defenses (Rogers, 2011). Death reflection leads to unselfish, intrinsic behaviors (Cozzolino, Staples, Meyers, & Samboceti, 2004). These insights help put TMT and mortality salience research in perspective, and help shape future interventions intended to help people grow from reflecting on the inevitability of death

Meaning Management Theory

Whereas Terror Management Theory helps us manage the terror of death rather defensively, Meaning Management Theory places our quest for meaning at the center of a motivational impetus (Wong, 2007). Instead of the TMT-informed unconscious dialogue that responds to death-related thoughts with heightened interest in the norms of the society we subscribe to, a primary motive of finding meaning in life summons an inner dialogue of, “*how do I want to be spending my time so that it feels like it actually means something?*.” Wong (2007) maintains that the drive to derive meaning, find authenticity, and grow are the ways in which we respond to the realities of death— if we are coached to adopt a positive life orientation.

Related to meaning management theory is the Meaning Maintenance Model (Heine, Proulx, & Vohs, 2006)— where contemplation of death is explained as the most profound interruption in our “meaning frameworks” that we base our ways-of-living assumptions on. We engage in a process called *fluid compensation* to deal with the surreptitious feeling of meaninglessness that can sometimes fill the void between living and dying (Heine, Proulx, & Vohs, 2006). Mortality salience triggers a motivation within us to maintain— or regain control of— meaning in our lives, like alleviating uncertainty in other facets of life, boosting our self-esteem in check, making social connections, and taking part in activities that we believe matter in some way (Proulx & Heine, 2006).

Ontological Confrontation

Facing the inevitability of our death— known as ontological confrontation— can happen in an instant grounded in reality, like in the unfortunate event of a dire health diagnosis, or as an imagined experience far off in the distance. In these instances our sense of ontological security (that comforting sense of continuity we feel about our life literally continuing; Giddens, 1991) can be shattered; events that fail to match our carefully crafted meanings and social schemas, or frameworks of how we build others into our lives, shake our world foundations (Mellor & Shilling, 1993). Personal construct theory (Kelly, 1955) is based on the idea that we develop constructs— or meanings— to make sense of ourselves and anticipate future events. In the role of *person-as-scientist*, we create hypotheses about categories of our lives, and must refine our constructs when faced with threats, like getting laid off from work or being asked for a divorce. Reflecting on death, for example, is seen as a threat that calls for a fundamental change in the way we construe who we are (Lavoie & de Vries, 2004), causing us to rebuild new constructs of how we see ourselves and plan for the future. There are no shortage of prompts in our daily lives that force us to get creative and make sense of how the death-related events and experiences fit into our worldviews— from reading about a pop star’s overdose to having to plan a funeral— we regularly comprehend death and what it means for us through the social worlds we live in (McManus, 2013).

The meanings we attach to death, as multidimensional as they are, act as triggers for emotions, motivations and actions (Cicirelli, 2001). The Personal Meanings of Death Scale (Cicirelli, 1998) measures how we view death along four dimensions: death as *afterlife* (the promise of a heaven of something similar), death as *extinction* (no life beyond death), death as *legacy* (leaving something of value behind for others to benefit from), and death as *motivator*

(the catalyst to set and reach goals in life). In one study, younger adults identified with death as a motivator more than older adults who have presumably accomplished many of their hopes and dreams, although qualitative research has shown that older adults are still motivated to wrap meaningful goals up (like completing the family tree project or coaching a youngster in the family; Cicrielli, 2001).

Holcomb, Neimeyer and Moore (1993) studied death attitudes through the content analysis of free-form narrative responses to questions like “*what is your personal philosophy of death?*” and “*what is death? What does it mean to you?*”. Over 60% of respondents wrote about their death as having a purpose with a reference to a continued existence in an afterlife. Less healthy respondents wrote about death as more purposeless. Females tend to be more open to the contemplation of death, whereas males tend to favor avoidance on the subject (Lavoie & de Vries, 2004).

Research shows that those who feel negatively about death also tend to feel negatively about their lives; conversely, those who adopt a neutral acceptance towards death show statistically positive relationships to happiness (Gesser, Wong, & Reker, 1988). Individuals who believe they’ve lived either a physically or emotionally deprived life “believe that to die now would be intolerable” (Aronow, Rauchway, Peller, & DeVito, 1981, p. 42).

Some researchers attribute our propensities to avoid thinking of death as more of an *illusion of self-control* than a defense-based denial, especially in people with beliefs rooted in a high level of desire for personal control (Taylor & Brown, 1988). Positive “illusionists” possess core beliefs that their lives will be long, healthy, and that while death looms, it’s off in the distant future. Even in the face of false alarms that provide glimpses of death in front of these core-believers— like cancer scares or near-miss car accidents— the illusion of invincibility is

strengthened in what Breznitz (1983) calls *single-trial experiences*. These people who are exposed to close calls of death rarely take their mortality seriously; the fact that they are still alive and well after having a melanoma mole removed, for example, reinforces their belief that death is far from imminent *for them*.

Kastenbaum (2004) writes of “practicing death”—the ways in which we try the idea of our own death out—like coming to terms with smaller losses and change in our lives, interacting with grieving people, pausing to pull over for a funeral procession, worrying about loved ones passing away in a random car accident. By trying death on for size in even these most subtle ways, we are paradoxically able to more fully appreciate life (Kastenbaum, 2004).

Given our stellar death-avoidance skills, we have a tendency to depend on symbols, images and rituals to make sense of death in what Kastenbaum (2004) refers to as a *concrete universal*—the pseudo-solidification of this abstract and daunting concept. Photos of passed elders sit on the mantelpiece, funerals provide ceremonial reassurance, tombstones help solidify that someone we loved was once with us, and memento mori coins help ground something that is hard to conceptualize.

Existential psychotherapists and philosophers are convinced of the upsides of ontological confrontation. Appreciating the role of mortality in our lives, psychologist Hoffman refers to how we create our realities and meanings “in the teeth of the constant threat of nonbeing and meaninglessness” (1998, p. 16). Irvin Yalom (1980), a prolific voice in the existential psychotherapy community, champions the notion that death is a powerful agent of change. Feifel (1990) credits the death movement and one of its aims of anticipating death for providing organizing principles in how we conduct ourselves. Believing that acceptance of our finitude creates a portal to self-knowledge (Feifel, 1969), he maintains that the energy spent suppressing

the facts of finality could be better invested in the positive and creative aspects of being— of *living* (Feifel, 1990).

Singh (2016) notes that the acknowledgment of death arouses a sense of wonder, which turns life into an enigmatic riddle to figure out our destiny. Relating to death in a deliberate fashion provides an existential jolt that just might lead to a transcendence of our daily existence— awakening us from what Schumacher (2010) refers to as the drowsiness of the human condition that denies death as an experience to reflect upon.

Terror Management Theory (TMT) research and discourse has traditionally focused on the defensiveness that's so often stimulated in the face of death— the dark side, per se— without considering the bright side that terror management potentially has to offer us. Zealous adherence to one's worldview can also include prosocial values like equality, empathy, forgiveness, compassion and helpfulness (Vail et al. 2012). In the wake of the 9/11 terrorist attacks— which brought awareness of death to the forefront for many— the character strengths of gratitude, hope, kindness, leadership, love, spirituality, and teamwork were elevated in surveyed individuals even ten months after the event (Peterson & Seligman, 2004). Mortality salience, it fortuitously turns out, has a host of underappreciated facets that we can leverage to our advantage in the quest for better-lived lives.

To review, mortality salience is seen as beneficial for different reasons: TMT proponents and Becker's death-denial advocates believe that we can handle the terrors of death through precarious social constructions, like culturally accepted worldviews and bolstered self-worth (Solomon, Greenberg, & Pyszczynski, 2015). The existentialist "wakeup call" school of thought (inspired by philosophers like Kierkegaard and Heidegger) sees us benefitting from ontological confrontation by questioning our worldviews and living authentically in accordance to our values

as a way to dissolve the anxieties of death (Martin, Campbell, & Henry, 2004). Regardless of the approach, a genuine understanding of our own mortality is seen to have profound psychological benefits and can be a catalyst for growth (Martin, Campbell, & Henry, 2004)—specifically in the realms of enhanced self-esteem, locus of control, and existential well-being (Cozzolino, Blackie, & Meyers, 2014).

Brushes with Death

“Remembering that I’ll be dead soon is the most important tool I’ve ever encountered to help me make the big choices in life. Almost everything— all external expectations, all pride, all fear of embarrassment or failure— these things just fall away in the face of death, leaving only what is truly important. Remembering that you are going to die is the best way I know to avoid the trap of thinking you have something to lose. You are already naked. There is no reason not to follow your heart. Your time is limited, so don’t waste it living someone else’s life. Don’t be trapped by dogma — which is living with the results of other people’s thinking. Don’t let the noise of others’ opinions drown out your own inner voice. And most important, have the courage to follow your heart and intuition. They somehow already know what you truly want to become. Everything else is secondary.” – Steve Jobs’ 2005 Stanford commencement address (Naughton, 2011)

Close encounters with death act as the ultimate wake-up call. Finding ourselves on the precipice— on the edge of whatever we believe to be in store for us when we pass away— is a rare event that most of us will never experience.

People who have survived close brushes with death reportedly experience greater immersion in their lives— dismissing the trivial, unimportant aspects that once troubled them (Yalom, 1980), mindfully living in the present moment, and appreciating even the most banal of those day-to-day occurrences (Martin, Campbell & Henry, 2004), like clouds forming and metamorphosizing in the sky. Survivors of trauma report more favorable appraisals on the value of their lives after being jolted out of complacency (Janoff-Bulman, 2004). Shedding the expectations we believe society places on us, after flirting with death, we appear to grant ourselves the permission to live in ways that are more authentically *us*. “The ‘prescription’ of how to live given by family, culture, profession, religion, or friends loses its grasp. Perhaps, in this way, knowing that you have a terminal illness is of value” (Kuhl, 2002, p. 227). In working with terminally ill people, Kuhl (2002) noted that having moments of truth with death “serves as a roar of awakening... It ends the routine and indifference... Because they know they cannot escape death, they embrace life—their own life” (p. 227).

Grasping the impermanence of our existence can act as a proverbial wake up call, waking us up to the values we want live our lives by with passion, rather than the values that others have imposed upon us (Martin, Campbell, & Henry, 2004). Near-death experiences tend to favorably sharpen and prioritize our values (Groth-Marnat & Summers, 1998), which typically shift from culturally conditioned matters of importance (like what kind of car we drive) to more personal and intrinsic values (like *who* we're driving to spend precious time with, in whatever make and model of car gets us there; Martin, Campbell & Henry, 2004). While brushes with death can trigger the defensive safe haven of an established worldview (Greenberg, Pyszczynski, & Solomon, 1986), death awareness can do more than elicit defensiveness, however; it can provide a wake-up to the ways we're living out of accordance to our values and allow us a second chance to remedy anxieties that result from living inauthentic lives (Martin, Campbell & Henry, 2004).

Experiencing a close encounter with death— like narrowly escaping a terrorist attack or receiving undesirable news from a doctor— shatters the assumptions we hold to be true about ourselves (reiterating Kelly's [1955] Personal Construct Theory) and affords us the opportunity to rebuild the beliefs we have about our life *and* death. Experiencing a close encounter with death has been described as a culture shock; individuals often undergo revised ways of seeing themselves, others, and their concept of time (Furn, 1987). Many open themselves up to new educational, career and relationship experiences as they grow and shape their new beliefs— often in ways that can spur post-traumatic growth. Tedeschi and Calhoun (2004) refer to this counterintuitive growth as the positive psychological change that occurs as a result of adversity. The post-traumatic growth phenomenon that can arise from near-death experiences or major life crises likely occurs from the psychological responses of seeking emotional relief, comprehension, and creating an architecture of understanding that enables the acknowledgment

of paradox— that meaning and richness can be found in the midst of complex despair (Tedeschi & Calhoun, 2004).

Survivors of life-threatening illnesses cognitively adapt to their brushes with mortality in three ways: by searching for meaning, attaining a sense of mastery over their lives, and reestablishing their self-esteem (Taylor, 1983). Forging meaning isn't simply about understanding *why* they were struck with the illness in the first place— although 95% of cancer patients in a study by Taylor (1983) made causal attributions (explanations) about why their cancer developed. Meaning was sought and found by these studied cancer patients by reappraising their lives and finding their time more valuable, developing refreshed attitudes towards their lives, becoming more self-aware and reorganizing their priorities to diminish what they saw as trivial issues— like worrying about being late for a meeting, or concerning themselves with other people's problems. These patients lasered in on what they deemed to be the important things in life (people that mattered, revitalizing interests, etc.) Fifty three percent of the cancer patients participating in this study admitted that they felt better adjusted in their lives as a result of experiencing cancer (Taylor, 1983).

Getting close to death or experiencing traumatic events don't necessarily make us happier, but survivors do consistently report more of a sense of purpose, more self-actualization, and more wisdom in life (Noyes, 1983). Respondents in a survey of people who had close encounters with death (near drownings, falls, car accidents, and serious illnesses) appear to undergo "rebirths" into newly enhanced lives, notably described as full of aliveness (Noyes, 1983).

Near death experiences (the surreal state of consciousness that occurs amidst clinical death; Irwin, 1988) are often characterized by out-of-body experiences (Blanke & Dieguez,

2015). A recent study found that after exposure to an out-of-body experience brought on by virtual reality, participants' fears of death were reduced, and 63% of them reported an amplified belief in life after death— compared to 32% of participants in a control group without virtual reality out-of-body experiences (Bourdin, Barberia, Oliva, & Slater, 2017). Virtual reality is now being used to simulate end of life experiences in an effort to help hospice and healthcare workers better empathize with patients as they approach the final hours of death (Burge, 2018).

The concept of quantum change bears a close resemblance to near death experiences— these are the sudden epiphanies that lead to profoundly deep and lasting transformations of perspectives, priorities and values (Wood, 2006). Similar to the transformation of Ebenezer Scrooge from *A Christmas Carol* (Dickens, 1905), people experiencing this phenomenon realize benefits similar to those who have had brushes with death. A deep gratitude for life is a common characteristic of quantum changers. Miller (2004) describes this profound subjective experience as a developmental metamorphosis, like a “fast-forward in what Maslow described as self-actualization” (p. 459).

The question remains: how do we glean the benefits of near-death experiences without having to actually *experience* near-death— what with all its risk and drawbacks? Noting the unfortunate effectiveness that traumatic events have on illuminating the value of life, Janoff-Bulman and Yopyk (2004) challenge psychologists to discover alternative paths to awaken us and teach us to live lives through fresh eyes— in the absence of adversity, trauma or loss.

Our Perceptions of Time: Life is Short (or is it Long?), and then We Die

Temporal Scarcity

“We don't beat the Grim Reaper by living longer, we beat the Reaper by living well and living fully, for the Reaper will come for all of us. The question is what do we do between the time we are born and the time he shows up.” – Randy Pausch's last lecture (2007)

The awareness that our lives have ticking countdown timers is a basic human characteristic (Carstensen, Isaacowitz, & Charles, 1999). How can we encourage a more profitable appraisal of the time we have to spend as mere mortals?

As a resource becomes scarce it increases in its perceived value— a concept known as temporal scarcity (Moore, 1963). Framing an event, such as our lives, with a proverbial expiry date has been shown to make it feel that much more valuable and precious (Kim, Zauberaman, & Bettman, 2011). King, Hicks, and Abdelkhalik (2009) cleverly weave in what we know to be true about the scarcity heuristic— that rare or temporary things are believed to possess greater value— in their take on what death means to us. Said simply, “life becomes valued to the extent we recognize its potential unavailability” (Janoff-Bulman, 2004, p. 33). Rather than seeing death as a threat that can ignite unconscious defenses, the encouragement is to see it as a reminder that our lives are commodities that are subject to loss (without exception); this scarcity makes life, by definition, more valuable. Study results show that reminders of death essentially translate into immediate reminders of life, that it is a scarce and valuable “asset” worth preserving (King, Hicks, & Abdelkhalik, 2009). These researchers have found that by enhancing the value of our lives— by tapping into the scarcity of our time— death awareness is heightened in a productive way that acts as an impetus to create more meaning.

Tversky and Kahneman (1979) nod in agreement to this value-related appraisal of the scarcity heuristic; their prospect theory asserts that we're more motivated by the risk of losing something than the possibility of gaining something of similar value. The idea of living life more fully isn't as motivating without the backdrop of death to highlight what we have to lose. Interestingly, having aspirations or goals in life have been shown in studies to elongate the reference point we use to determine whether we see something as a loss or a gain, like how much we're willing to gamble on how long we think we will live (van Osch, van den Hout, & Stiggelbout, 2006). Participants in this study were less willing to hypothetically gamble away years of their lives if they articulated goals like wanting to have kids, enjoy retirement, or even stay alive to look after their dog (van Osch, van den Hout, & Stiggelbout, 2006).

Research has shown, quite counterintuitively, that the contemplation about the *end* of an experience can increase our enjoyment in the present moment (Kurtz, 2008). While prospection about how a positive experience ends— such as contemplating how we will be described in our eulogy— has not been shown to increase positive affect in the moment, the motivational and emotional implications associated with the mental machinations about what lies ahead have been duly noted in weeks after contemplative exercises (Kurtz, 2008).

Studies demonstrate that when we are reminded of the passing of time during particularly meaningful experiences, it elicits the mixed emotion of poignancy, in both younger and older adults alike (Ersner-Hershfield, Mikels, Sullivan, & Carstensen, 2008). In the stark face of abbreviated lifespans, terminally ill patients report feeling a poignant appreciation of the present moment and even blessed by the gift of being able to reprioritize their precious time left (Yang, Staps, & Hijmans, 2010). Significant experiences in our lives shape our view of the horizon ahead of us and can shift the intertemporal decisions we make; research demonstrates that young

people who have experienced the death of a loved one from cancer are apt to make longer-term decisions over shorter-term ones (Liu & Aaker, 2007).

Prospection— a feature of human consciousness that evokes evaluative representations of what our futures *could* look like across a global future horizon (Seligman, Railton, Baumeister, & Sripada, 2013)— allows us to heighten our awareness of life’s ending. This way of understanding the boundaries of our time is keenly related to our decisions about the goals we pursue, our emotional regulation, and our sense of urgency around our levels of social connectedness (Carstensen et al., 1999).

Being able to conceptualize ourselves across a broader spectrum of time is the hallmark of what is known as temporal self-continuity (Rutt & Löckenhoff, 2016), and the focus of our future temporal self leads directly to increased self-enhancement (Seto & Schlegel, 2018). By looking into our futures over a longer time horizon— in our case with memento mori, as far forward as we can possibly imagine— we open up options that become available to us over years and decades (Seligman et al., 2013), enabling a greater variety of choice with the actions we take *today* to lead better lives up until our final hours.

Socioemotional Selectivity Theory

Lifespan psychologists have confirmed that our attitudes towards death evolve as we age (Neimeyer, Wittkowski, & Moser, 2004). When we believe that death as a distant event— as we’re wont to do while in our youth— we perceive it as a remote fantasy stripped of all threat (Bannister & Mair, 1968). Young adults, for example, consistently think of death as an occurrence outside of their own experience (Neimeyer, 1985) and simply dismiss thoughts of death. Predictably, our perspectives shift as we enter middle and late adulthood. The physical experience of aging metaphorically indicates our creep towards death; we view time through the lens of *how much we have left*, given its diminishing nature. In the spirit of having something to look forward to, our fear of death has a tendency to decrease upon reaching our elderly years— perhaps due to a comforting perspective based on life experience gained and a softening towards death’s inevitability (Bengtson, Cuellar, & Ragan, 1977).

Socioemotional selectivity theory (Carstensen, Isaacowitz, & Charles, 1999) asserts that our perception of time horizons significantly impacts our motivation and goals. People with limited subjective time horizons (older adults) tend to favor goals related to meaning and emotional satisfaction, contrasted with goals of knowledge acquisition and novelty-seeking that are associated with longer time horizons (younger adults; Carstensen, 2006). Carstensen, Fung, and Charles (2003) point out that the anticipation of an end to life is what makes life meaningful in our aging years.

Construal Level Theory

Construal Level Theory (CLT) ropes in the notion of psychological distance— the subjective sense we have about whether something is close or far from ourselves in the present moment (Trope & Liberman, 2010). We're more inclined to think abstractly about events that we perceive as psychologically distant— whether they are temporally distant (*"the life expectancy tables say I still have four decades to live"*), spatially distant (in a faraway location) or hypothetically distant (*"it's unlikely that I'll die of skin cancer"*). Details become fuzzy or absent altogether when we construe larger psychological distances, whereas details become more concrete when we perceive events and possibilities to have smaller psychological distances (Galfin & Watkins, 2002). Most of us construe the idea of death to be both temporally and hypothetically distant— leading to an abstract, uncertain way of thinking that can be associated with rumination and psychological distress (Galfin & Watkins, 2002). Shrinking the temporal and hypothetical distance between our current reality of being alive and our future death— by actively contemplating how temporary we really are— enables a concrete view of reality that ultimately decreases our anxiety (Trope & Liberman, 2010).

Motivators and Regrets About Life and Death

Mortality Motivation

We've discussed that by reflecting on death— if done in a deliberate fashion— we can spark desires to live life differently: whether it's wider, deeper, or both. What are the mechanisms that inspire us to take action with our ontological confrontations? We'll look at motivation in terms of the dual-system model, action tendencies, and the epiphanies that can arise from discontinuous learning, and a drive for self-actualization.

Wong & Tomer (2011) shed light on the tension created between two key motivational orientations: the avoidance and approach systems. In this dual-system model, we're wired to defensively protect ourselves by *avoiding* danger, suffering, and pain. We're also wired with an *approach system* that drives us to actively participate in our lives, pursue things that matter, and take the very risks that the avoidance system seeks to shelter us from— like saying *I love you* in the face of possibly-unrequited love, or putting one's name in the ring for a promotion in the face of possible rejection. Facing up to these risks by balancing both avoidance and approach motivations is required for us to flourish (Wong & Tomer, 2011). Wong (2013) asserts that a crucial element of the approach system is our ability to evaluate and reflect on our lives, asking questions like "*am I living the life I want to be living?*" and "*what else is out there for me?*"— which creates the conditions for meaning to take root— even when the pursuit of meaning isn't easy or comfortable. The duality hypothesis at the center of the dual-systems model contends that the interplay between the approach (positive) and avoidance (negative) systems is a prerequisite for optimal outcomes in our lives (Wong, 2010).

When we face endings, we experience mixed emotions of poignancy that then elicit different kinds of *action tendencies*, or behavioral outputs (Lazarus, 1991); learning about celebrity deaths from cancer, for example, has been shown to prompt study participants to become more introspective and likely to seek information about the causes of their deaths (Myrick, 2017).

The action tendency of sadness is to avoid others and enter a state of withdrawal, while the action tendency resulting from happiness is to approach others and build on the positivity (Ersner-Hershfield, Mikels, Sullivan, & Carstensen, 2008). Being bored often provides the impetus we need to seek out challenge and stimulation, and it also spurs action tendencies that provide reassurance of a sense of meaning (like engaging in a social activity after a prolonged period of time away from friends; van Tilburg & Igou, 2012).

Consciously thinking about death can motivate us to intentionally shift our goal pursuits (Vail et al. 2012). Upon reflection of death, we are less concerned with extrinsic goals that lead to money, fame and smaller clothing sizes; we become more motivated by intrinsic goals that are characterized by personal growth, meaningful relationships and being better citizens in our communities (Kosloff & Greenberg, 2009). To be clear, this does differ from our experience of nonconscious, anxiety-ridden thoughts about death— they often trigger us to bolster our self-esteem by defaulting to the more superficial extrinsic goal efforts. The difference is whether we are deliberate with our memento mori moments. Singh (2016) believes that the contemplation of death inspires a philosophical approach to living that embraces simplicity and moderation, while downplaying materialistic pursuits.

Conscious death awareness can also motivate us to improve our health, so long as we can connect the dots between the activity actually leading to our longevity (Vail et al. 2012). When

we actively think of our impermanence, our intentions to eat better and exercise spike (Arndt, Schimel, & Goldenberg, 2003), smokers feel motivated to smoke less (Arndt et al., 2011), and we pledge to use more sunscreen (Routledge, Arndt, & Goldenberg, 2004). Interestingly, the phenomenon and activity of being intrinsically motivated to better ourselves is typically followed by feelings of vitality (Ryan & Frederick, 1997), a desirable outcome in our quest to feel maximally alive.

An interesting body of literature helps explain the mechanisms of the epiphanies that can so often occur from near death experiences or conscious memento mori interventions. Change does not always occur in a “slow and steady wins the race” approach—its pattern isn’t always gradual and linear (Hayes, Laurenceau, Feldman, Strauss, & Cardaciotto, 2007). Quite the opposite is true, as continuous change often takes place—born out of the nonlinear dynamical systems theory that is akin to shaking a snow globe, whereby the bits of snow experience a whirlwind of disturbance and variability before settling into a beautifully new snowy landscape (Hayes, Laurenceau, Feldman, Strauss, & Cardaciotto, 2007). Much like our discussion on post-traumatic growth, we often learn, change and develop as a result of destabilizing and nonlinear occurrences (Tedeschi & Calhoun, 2004). Discontinuous and transformational change can be prompted in the face of dissonance in life—like after chronically dissatisfying events that culminate in what Baumeister (1994) coined the phrase of a “crystallization of discontent.” Repeated negative events or emotions (like an unhealthy personal relationship or the conspicuous absence of hobbies in a work-filled life) can set the motivational wheels in motion for us to make life changes (Cope, 2013). Learning from unusual and discrete events (like memento mori endeavors) can be transformational for us precisely because the act of reflecting on death is a non-routine experience—this kind of reflection acts as a jolt to our “business as usual” ways of

living, instigating a miniature crisis that provokes us to question what we believe to be true (Cope, 2013). Paradigm shifts can change how we see ourselves after engaging in the highly valuable act of critical self-reflection— what Mezirow (1990) sees as the most impactful kind of learning experience we can have as adults. By taking a disorienting dilemma (like divorce, retirement, death of a spouse or an epiphany in the midst of death reflection), and critically reflecting on what it really means to us, we can benefit from transformative learning and then act on those ah-ha's (Mezirow, 1990). Studies show that having “ah-ha” moments of insight leads to more accurate and quality-filled solutions to problems (Danek & Salvi, 2018).

Koestenbaum (1976) posits that one of the main positive consequences of anticipating death is that it motivates us to find meaning in life, take charge of our lives, and craft a plan for our lives. We gain new insights from these epiphanies that then activate motivation to take action. The more we can instigate or engineer the ah-ha, lightbulb moments with death awareness, the more likely we might be to engage in critical reflection, pursue intrinsic goals, and activate our approach systems towards living life more fully.

Self-Realization Theories

Some of the most well-respected names in psychology have provided fodder since the 1950s for self-helpers to reach their potential; generations of the motivated and inspired have aspired to reach the top of Abraham Maslow's (1968) self-actualization pyramid, becoming "everything that one is capable of becoming" (Maslow, 1943, p. 381). Just as many potential-seekers have tried to get to know and live up to their 'ideal self', according to Rogers' (1959) concept about our desire to realize the best versions of our actualized selves. We have natural tendencies to want to become the best we can be. Maslow (1968) characterized the self-actualized person in part as free from the distortions that fear of death dispenses, and Rogers (1980) saw the fully functioning person as open to experiences with death— even conceiving of death as an interesting experience. With the advent of the human potential movement, death was deemed an opportunity to actualize our potential.

Self-actualization, according to the research labs, consistently protects people from death anxiety (Lavoie & de Vries, 2004). Baumeister (1987) wisely noted that unfulfillment of our potential has the potential to lead to mid-life crises.

Of particular note here is that of Maslow's personal brush with death through a near-fatal heart attack in 1957; he wrote of his experience:

The confrontation with death—and the reprieve from it— makes everything look so precious, so sacred, so beautiful, that I feel more strongly than ever the impulse to love it, to embrace it, and to let myself be overwhelmed by it. My river never looked so beautiful... Death and its ever-present possibility makes love, passionate love, more possible. I wonder if we could love passionately, if ecstasy would be possible at all, if we knew we'd never die (May, 1969, p.99).

Regrets

“A man is not old until regrets take the place of dreams.” – John Barrymore

“Twenty years from now you will be more disappointed by the things that you didn't do than by the ones you did do. So throw off the bowlines. Sail away from the safe harbor. Catch the trade winds in your sails. Explore. Dream. Discover.” – Mark Twain

“Of all sad words of mouth or pen, the saddest are these: it might have been” – John Greenleaf Whittier

Regrets— much like death, something we’re looking to avoid— can motivate us to change our behavior and better the circumstances of our lives (Reb, 2008). Defined as the negative emotion born from our awareness of *what could have been* if we’d only made a different decision with the benefit of 20/20 hindsight (Gilovich & Medvec, 1995), Mark Twain was spot-on that we’re more likely to regret the things we didn’t do than the things we did (and just wish we did better). Regrets based on inactions (like not taking that big job in London, or letting your secret high school flame become the one that got away) tend to haunt us, mostly because these paths not taken represent gaps in our actual selves and what we’ve envisioned as our ideal selves (the versions of us that makes hopes and dreams and goals come true; Davidai & Gilovich, 2018).

We value regret substantially more than any of the negative emotions, perhaps because we innately grasp its functional value to help steer our decisions (Saffrey, Summerville, & Roese, 2008). This insight offers tremendous potential for how we opt to shape our lives. Kagan (2012) wisely points out that death forces us to be careful; we risk getting to our end of days and facing the stark realization that we spent our time pursuing the *wrong things*, instead of the goals that might have given us a shot at even more joy. Given that life isn’t long enough for a series of revisions or do-overs, we’re best served to identify our most pressing wants and create a sense of

death-inspired urgency to take action on them (Kagan, 2012). This perspective is reminiscent of Parkinson's Law— we uncannily drag the time it takes to complete tasks out to fit the amount of time we have available for the task (Bryan & Locke, 1967).

Older adults, according to Erikson's stages of development (1950) seek the development of wisdom, feelings of fulfillment, and a sense of contentment in the eighth and final *ego integrity versus despair* stage. Erikson (1982) believed that despair was inevitable for those guilty about the past, looking back with the wistful belief that they didn't reach the goals they had set forth or dreamed about. Conversely, ego integrity (and maturity) is achieved for those with the conviction they've lived their lives well (Wong, 1989). Upon reflecting back in a life review exercise— a structured reminiscence on one's personal narrative and how one's memories contribute to meaning (Haber, 2006)— many feel a sense of hopelessness linked to their disappointment in what they perceive as a life poorly lived (Corr, Corr, & Meagher, 2013). Hospice patients in a study by Neimeyer, Currier, Coleman, Tomer, and Samuel (2011) were often consumed by missed opportunities and perceived shortcomings, with little or no time to rectify the missteps on their near-term deathbeds.

DeGenova (1995) gave *The Life Revision Index*— a questionnaire designed to ascertain how retired people would spend their time if they had the chance to live their lives over again— and learned that more than half of the study participants would have spent much more time pursuing their education, in family activities, doing things they enjoyed, traveling, and taking good physical care of their bodies. Over 50 percent of the respondents said they'd spend less time worrying about work if they had a chance to live their lives over again (DeGenova, 1995). Similar studies that dig into what college- and middle-aged adults regret (versus retired adults)

reveal that romantic regrets top the charts, with family relationship regrets taking second place (Morrison & Roese, 2011).

When asked if readers of her massively popular book, *Top Five Regrets of the Dying* (2012), changed their behaviors after learning about what we'll regret on our deathbeds, Bronnie Ware responded that, "many people have contacted me to say that the book has given them both courage and permission to truly be their selves" (Ware, personal communication, August 5, 2014). Indeed, the number one regret she cited in the palliative care patients she treated was that they wished they had the courage to live the lives they wanted for themselves, not the lives others wanted for them (Ware, 2012). Leading an authentic life is woven into the doctrines of existential literature—specifically the work of Heidegger (1962) who extolled the virtues of the *authentic mode of living*, where we honor our true nature and take responsibility for living with integrity towards ourselves. Living in grave misalignment with our true selves apparently isn't living at all.

An unflinching awareness of death can subtly shift us into a more vital state of being, or even change the trajectory of our lives. Consider the story of how the Nobel Prizes came to be: Alfred Nobel was horrified upon reading his brother Ludwig's obituary in 1888— not just because of his sibling's passing, but because the newspaper accidentally published their draft for the wrong brother. Alfred essentially read his own obituary, and it wasn't flattering. "The Merchant of Death is Dead" headlined the newspaper, given Alfred's dynamite and ballistic inventions that made him less popular in some circles. Seeing his death and reputation unfold before him, and not liking what he saw, spurred Alfred to leave his deathly fortunes to the improvement of humanity (Benjamin, 2003). Alfred Nobel dodged a bullet of regret by a forced mortality

salience; our aim is to reflect on our lives and make the best choices without having to read obituaries written about us in error.

Positive Psychology's Role in Using Death to Bring Us Back to (More) Life

What do we know so far? We're all going to die, we avoid thinking about the fact that we're all going to die, smart people have constructed theories about why we don't want to think, talk or read about the fact that we're going to die, and our lives have the potential to be riddled with regret. What to do in the face of this seemingly dire situation? What follows is a suggested approach for the role positive psychology plays, to spark life back into us where we feel we might have flatlined. Can the contemplation of death, through the lens of positive psychology, help us fall in love with life?

Living the Good Life

*"Tell me, what is it you plan to do
with your one wild and precious life?" – Mary Oliver*

Positive psychology is the scientific study of "what makes life most worth living" (Seligman, 1999, p. 562). This tectonic-shifting philosophy altered the foundations that the field of psychology was built on when Seligman, as then-president of the American Psychological Association, articulated his revolutionary vision of how his field could return to their mission of helping make people's lives better. In a field that originally sought to do just that— improve the quality of people's lives— traditional psychology had strayed from its original mandate. Mired in the midst of a disease model that was centered around mental illness, the field was primarily focused on assessing and addressing suffering, disease and damage at the expense of overlooking the possibilities of human potential (Seligman & Csikszentmihalyi, 2014).

Shifting from the legacy science of psychology to the science of the good life, positive psychology favors the conditions and actions that lead to our thriving, rather than merely

surviving. Positive psychology is characterized by the study of character strengths and virtues, deeply held values, the development and indulgence in our interests, talents and passions to accomplish things we find to be worthwhile, positive interpersonal relationships (Peterson & Seligman, 2004), and our capacity to love and find meaning in life. Positive psychology provides an appreciative perspective on our potential and capacities (Sheldon & King, 2001), zeroing in on subjective experiences like life satisfaction and well-being.

Well-being is the multi-dimensional construct that valiantly attempts to give structure to what makes life worth living. Just as beauty is in the eye of the beholder, well-being is defined, measured and lived up to by our individual tastes and preferences– which lends reason to why there is no one, unifying model that can be agreed upon by the brilliant minds within the field of positive psychology and beyond. Even Carol Ryff, creator of one of the most well-respected well-being models in the hallowed halls of positive psychology, highlights the challenge of defining and assessing the structure of well-being (Ryff & Keyes, 1995), Ed Diener agrees that subjective well-being is not a unitary concept (Diener et al., 2017), and Shin and Johnson (1978) wisely note that well-being can be thought of as a varied concept that morphs according to one's chosen criteria. While we have consensus that *we have no consensus* when it comes to a collective way to conceive of well-being, there are a myriad of empirically backed well-being models that create helpful pathways and inspiration towards living life to its fullest.

Prilleltensky's (2016) I-COPPE framework of interpersonal, communal, occupational, physical, psychological and economic domains offer wide-ranging categories to assess and enhance our lives. Ryff's (1989) multidimensional well-being model emphasizes self-acceptance, positive relations, environmental mastery (feeling in charge of the situations we find ourselves in), personal growth, autonomy (feeling and acting independently despite social

pressures), and purpose in life. The Comprehensive Inventory of Thriving scale (Su, Tay & Diener, 2014) measures yet another approach to how we can positively function— looking at our relationships, engagement, mastery, autonomy, meaning, optimism, and subjective well-being. Diener’s (1984) Subjective Well-Being model outlines the importance of happiness, life satisfaction, and positive affect. Much of what has been defined about positive psychology thus far is encapsulated in Seligman’s (2011) PERMA model of well-being, which includes positive emotions, engagement, relationships, meaning, and accomplishments. Just as experts advocate the application of a *person-activity fit* assessment when defining what positive interventions might be most effective to introduce in our lives (Schueller, 2010)— meaning that we all have individual preferences and contexts for the activities that will boost our sense of well-being— we are also able to draw from these models to suit our individual and situational needs as they evolve over time (since well-being areas of emphasis do change over the lifespan; Hyde, Maher, & Elavsky, 2016). After contemplating death, for example, we might choose to lean on different aspects of the well-being constructs included in the aforementioned models, like expanding our positive emotions (alluding to the width of our lives) and deepening our sense of meaning (referring to the depth of our lives).

Engagement is a foundational construct within the field of positive psychology and is highlighted within many well-being models. Known as the state of psychological absorption when we’re immersed in highly engaging activities (Csikszentmihalyi, 1990), flow has immense implications towards living meaningfully rich lives in the midst of death awareness that we will continue to discuss at length in upcoming sections. In the spirit of living an engaged life to a version of its fullest, positive psychology is “the study of what we are doing when we are not frittering life away” (Peterson, 2006, p. 18).

Optimism, the ability to see our futures as bright and hopeful (Reivich & Shatte, 2003), also plays a central role in positive psychology's interest in living the good life. According to Seligman (1990), we are optimistic if we describe bad events as external, fleeting, and specific, while crediting good events as personal, permanent and pervasive. Optimism can motivate us to improve our situations in life and is a key aspect of resilience—our ability to navigate adversity and to grow in the face of challenges (Reivich & Shatte, 2003). Possessing an optimistic explanatory style with resilience is valuable during death reflection, so as to notice and expect the positive aspects of life, focus on what we can control, and take purposeful action (Peterson & Chang, 2003).

More than just interested in the individual, positive psychology also seeks to enable workplaces and institutions to become places for people to do their best work, and for societies to flourish with civic commitment (Seligman, 1999).

The Positive Psychology “2.0” Perspective: Infusion of the Dark Side

Earthquakes, bankruptcies, gut-wrenching heartbreak, COVID-19, fender benders... just as no one gets out of life alive, no one escapes life unscathed by the negative events and emotions— big and small— that are part of the human experience.

Some academics, not quite content with the original cannon of positive psychology’s decidedly positive emphasis, set forth to create a more dialectical appreciation of the positive *and* negative phenomenon in life (Ivtzan, Lomas, Hefferon, & Worth, 2015). Dubbing their nuanced approach the “second wave” of positive psychology, or a “2.0” version with a twist, this stem-off-the-branch of study into well-being appears well-suited to the contemplation of death. One could debate that positive psychology “1.0” also made room for the dark side of life— especially when the father of the field advises us to appreciate the role of pessimism in his book about optimism (Seligman, 1990). A judicious application of pessimism, contends Seligman (1990), enables us to appreciate reality more accurately— especially valuable in contrast to unwavering moments of optimism that can cause us to distort the reality of a situation.

Rather counterintuitive in a world that favors comfort, convenience, and sheer and utter pleasure is the idea that humans actually deteriorate without challenges and adversity placed on our bodies and minds (Lukianoff & Haidt, 2018). The hedonic pursuit of happiness, characterized by the maximization of positive emotions and the minimization of the negative ones (Peterson, 2006) is a well-worn path for most of us: dial the pleasure up, turn the displeasure switch off. Embracing challenge in our lives may ultimately lead to positivity. If our goal is to lead flourishing lives, an acceptance— a radical welcoming, even— of the negative side of life may help pave the way.

Barbara Fredrickson (2009) nods to *appropriate negativity* as a key ingredient in lives worth living. She makes an apt distinction between the negative emotions worth entertaining (anger, conflict and guilt) and the ones worth diminishing (shame, disgust and contempt). Fredrickson (2009) further asserts that appropriate negativity grounds us in a gravity-filled reality, in a healthy counterbalance to levity-filled positivity which positions us to flourish.

Furthering his admonishment for the “what doesn’t kill you makes you weaker” ethos in our current society, Jonathan Haidt (2006) introduces the *adversity hypothesis*, that we reach our peak levels of fulfillment and development because of– not just in spite of– the setbacks, failures and traumas that the cards of life deal us. A benefit of adversity is that it helps orient us to a more present-filled mindset, with clarified priorities (Haidt, 2006). Life goals often change in the aftermath of trauma, when various happiness traps (such as money, choice, and conspicuous consumption) carry less weight (Haidt, 2006). The ways in which we struggle during adverse circumstances can lead to the aforementioned experience of post-traumatic growth, where we encounter growth and development that surpasses our pre-crisis state (Tedeschi & Calhoun, 2004). The fact that 30 – 70 percent of individuals who undergo a traumatic event emerge with positive change is a testament to the power of adversity (Linley & Joseph, 2004).

Peterson (2006) articulately defends positive psychology’s position on the role negativity plays in a well-lived life– that the field of study doesn’t stick its head in the sands of glorious, sunny, happy beaches. His veritable laundry list of what ultimately turns frowns upside down is compelling: moments of crisis call upon and refine our character strengths, optimism does its best work in the face of failure, the experience of flow is contingent on overcoming challenge to achieve things that matter, and relationships stand the test of time if partners participate in healthy problem solving.

Indeed, positive psychology in its most holistic definition, includes the bittersweet moments, suffering, regrets, and acknowledges that the good life has both bright *and* dark sides (King, 2001), with meaningful complementarity between both sides (Lomas, 2016). Positive psychology aims for a comprehensive and balanced understanding of the human condition— inclusive of the good days, bad days, and all the days in between— a nuanced grasp of our happiness *and* our suffering (Seligman, Steen, Park, & Peterson, 2005). Peterson and Seligman (2004) also go so far as to suggest that crisis has a role to play as a crucible for the best parts within us, and academic Paul Bloom (personal communication, December 7, 2019) provocatively observes our all-too-human desires to intentionally seek out pain and suffering (like training for marathons or by joining the army), in paradoxical attempts to make meaning in our lives.

So how, more specifically, can positive psychology help us leverage death to help bring us back to *full* life, before we're six feet underground? The field of positive psychology is uniquely poised to explore— with the heft of all its theory and practice— this traditionally taboo topic. It appears that the well-lived life is reached in part because of the poignant contrast that exists between the highs and the lows— the troubles, setbacks and even traumas that life presents. We don't need to experience the depths of despair to gain access to well-being, but adopting the perspective that adversity is required for a full, rich life of meaning, can motivate us to reflect on death in a way that lets us tune into the upside of the dark side. This memento mori discussion is about more than “fixing” our death-related anxieties and grieving with slightly less sorrow. We're pushing beyond a few comfortable boundaries to give the promise of death permission to catapult us into something so much better.

An existential paradox is born from our awareness of mortality; we simultaneously want to play it safe and avoid risks while reaching out and experiencing more that life has to offer (Reivich & Shatte, 2003). We're reigned in yet also motivated to want more. Positive psychology with an existential twist encourages us to courageously confront death to live with more meaning and vitality (Wong, 2010)— to not accept an absence of distress or an “it’s fine” relationship to our lives, but to work for the greater cause of living both wider and deeper.

A Brief but Important Clarification of What This Memento Mori Discussion *Isn't*

Let us regroup on the purpose of this encouragement to reflect on death with positive psychology as a springboard, specifically by highlighting and debunking the assumptions that are easy to make within such a sensitive topic.

While undeniably finding the lighter side of the topic, this discussion isn't meant to dismiss the myriad of emotions that can arise with a view towards death. This melancholic embrace of such a confounding subject is paradoxically designed to cull the negative emotions and use them to our advantage as we build livelier versions of our lives. The act of prospecting ourselves years into the future to envision the positive and negative aspects of what might be in store (Seligman et al., 2013) may remind us to act in ways that benefit us now and into the future—like rekindling friendships we've let dwindle, or by taking better care of our bodies.

Many of us rightfully dismiss the cliché “*what would you do if you had a week left to live?*” question because we know it's unrealistic to live a life today that resembles what we'd *really* do in that fantasy week. Quitting our jobs with the help of several choice words directed at the boss, draining the bank account to fly to far-flung places at the front of the plane—none of that is what this is all about. Grasping the scarcity of our days is intended to trigger something productive, thoughtful and generative in our lives, not trigger us to abandon all reason. We can use memento mori exercises to sharpen our awareness of what we want and need to live bigger lives *now*, to course-correct life plans that might be paving their way towards future regrets.

This discussion is also not meant to sound like an admonishment for living lives that seem ostensibly... *vanilla*. Some of us prefer vanilla ice cream and aren't interested in two scoops of rocky road, and that's perfectly acceptable. The encouragement here is to live life even more vitally and on purpose—relative to our own needs and preferences. After contemplating the

diminishing time we have left, we might be inspired to have even more vanilla ice cream because it brings us such simple pleasure. We might feel inspired to become healthier versions of ourselves and consequently have less ice cream. Or we might be inspired to take our good old-fashioned vanilla and put a cherry on top.

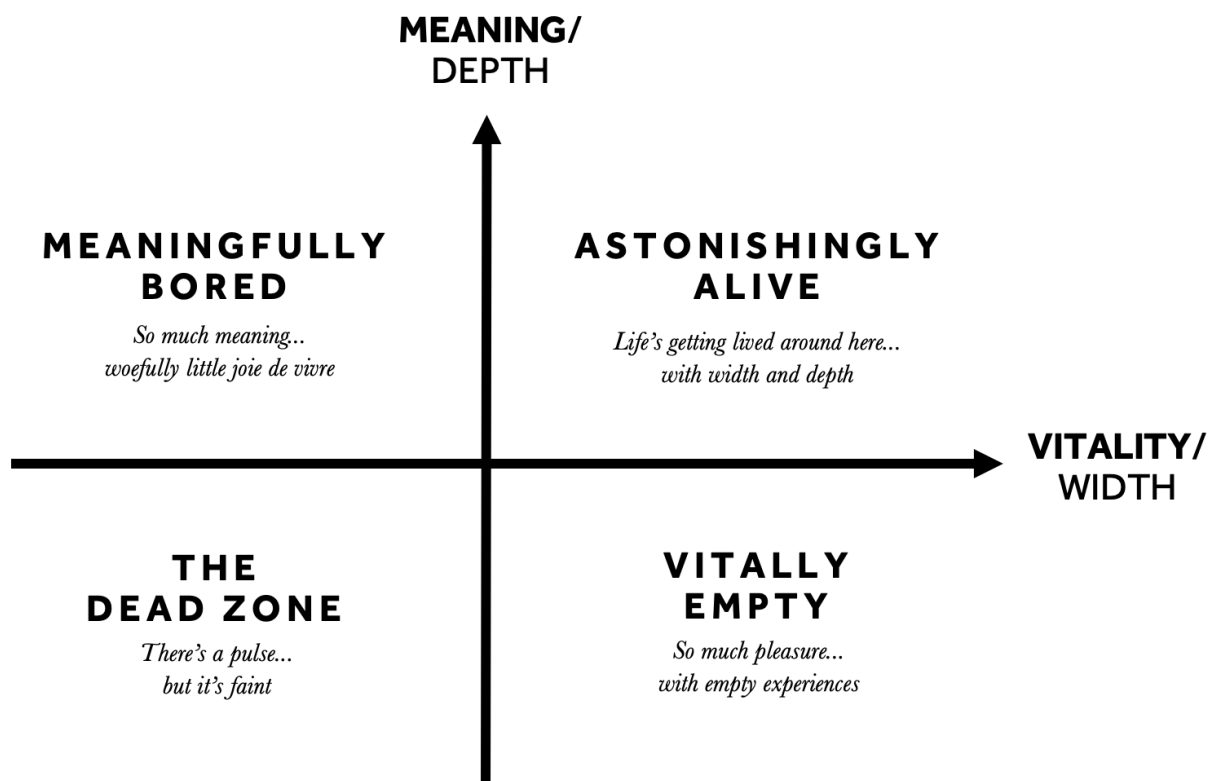
And since we'll be talking soon about vitality—our wish to feel very much alive in the shadow of inevitable death—we *won't* be talking about inundating ourselves with intense stimulation in an effort to remedy the blandness of boredom, for example (Eastwood, Cavaliere, Fahlman, & Eastwood, 2007). Making subtle tweaks to experience more of our lives might be more sustainable than engaging in extreme, thrill-seeking behavior (like taking rock climbing lessons instead of rock climbing without a rope). Pressure abounds to “live life to its fullest” and for most of us those words emblazoned on mugs and across social media feels less like encouragement and more like a lecture that potentially ends in judgment. This memento mori conversation is meant to inspire even the smallest of tweaks to appreciate and get more out of our lives, not make us feel like we're living wrong. Let's consider this a discussion about what we *could* do, not what we *should* do. Life is the possibility of more possibility.

The “Astonishingly Alive” Model

The intention of this memento mori endeavor can best be visualized through a proposed model (see Figure 6 below) that illustrates the relationship between the width and depth of our lives, and the benefits of simultaneously expanding and deepening both aspects. The metaphoric width is expressed along a continuum that refers to our degree of vitality (the positive sense of aliveness and energetic enthusiasm with which we approach life; Ryan & Frederick, 1997)—inclusive of our activities, interests and experiences that we initiate with zest. The metaphoric depth is expressed as the degree to which we find meaning in our life (a foundational aspect of well-being; Seligman, 2012)—how we choose to cultivate purpose and reason for the life we are living. Death can be the animating condition that motivates us to live both wider with vitality and deeper with meaning. We will discuss these concepts at length in the sections to come.

Figure 6

The “Astonishingly Alive” Model



Living Life to Its WIDEST: When We Find Ourselves Yearning for More

“I don't want to get to the end of my life and find that I have just lived the length of it. I want to have lived the width of it as well.” – Diane Ackerman

We're in the midst of an unprecedented demographic success story of human longevity that tells an inspiring tale on one hand and a cautionary tale on the other. As a human race we're living longer than at any time in history (Strulik & Vollmer, 2013); our maximum life spans have been 'maxing out' incrementally for the last 140 years (Wilmoth & Robine, 2003). U.S. men are lasting until 76.2 on average, with women edging them out by five years to an average age of 81.2 (Xu, Murphy, Kochanek, & Arias, 2020). Despite this accomplishment of extending the *quantity* of our years, an improbable irony has been documented considering the *quality* of our years. We're time-crunched and craving more hours in the day (Hamermesh & Lee, 2007), we're spending more time at work and fewer hours at play (Peterson, 2006), and 52 percent of us are leaving unused vacation days on the table each year (U.S. Travel Association, 2018). Despite extraordinary advancements in life expectancy, are we commensurately expanding our experiences of actually being alive?

People are living longer than ever, but what does it mean to “live wider”? I propose that the width of our lives could be characterized by the volume and quality of the experiences we actively participate in, with the heightened sense of aliveness known as vitality (Huta & Ryan, 2010) and zest. Kastenbaum advises us to “live fast and leave a good-looking corpse!” (2004, p. 356), emphasizing an all-out approach to life that makes up for its finitude with intensity, passion and urgency. While we don't need to live Instagram-able lives, are we staving off the inevitable boredom and living life in vivid color?

Vitality: Maximal Aliveness and Living Like We Mean It

“People say that what we’re all seeking is a meaning for life. I don’t think that’s what we’re really seeking. I think that what we’re seeking is an experience of being alive, so that our life experiences on the purely physical plane will have resonances with our own innermost being and reality, so that we actually feel the rapture of being alive.”

– Joseph Campbell, *The Power of Myth*

Similar to how the traditional field of psychology appraised well-being as simply the absence of illness, and positive psychology advanced the notion of well-being with its clarion call to seek out and live the good life, being fully alive can’t be defined as the absence of death, either. Just because we’re alive, it doesn’t mean we’re thriving— as any one of us can attest after a series of ho-hum weeks of work that pass us by, “gnawed by the worry that life is elsewhere” (de Botton & Armstrong, 2013, p. 89). We can be alive but lacking in vitality and meaning to the point that we are anything but flourishing; we can be merely surviving and even floundering. It might be helpful to think of ourselves on a spectrum at any given moment from being *a little bit* alive to *a lot* alive, with varying degrees of vitality. In an effort to sculpt lives most worth living— lives void of as many regrets as possible— we aren’t engaging in memento mori explorations of mortality to simply settle for what feels mundane. Positive psychology is interested in what is possible beyond survival (Seligman & Csikszentmihalyi, 2014); if we’re using death to bring us back to life, let’s look into what it means to be *astonishingly alive*. We’ll review vitality and the avoidance of boredom through novelty as the backdrop for the ways we can widen our lives.

Vitality is defined as a positive sense of aliveness, with a high degree of enthusiasm and spirit, including both somatic (of the body) and psychological factors (of the mind; Ryan & Frederick, 1997). This subjectively available energy, known as one’s *health of spirit* (Ryan & Frederick, 1997), is seen as an essential aspect of our overall well-being (Ryan & Deci, 2001). Studies have shown that subjective vitality mediates subjective happiness through life

satisfaction; as life satisfaction goes up— with the help of subjective vitality— it acts as the tide that also lifts the boats of subjective happiness (Uysal, Satici, Satici, & Akin, 2014.)

Subjective vitality is associated with high self-esteem, agency and growth (Ryan & Frederick, 1997). People with high degrees of subjective vitality are also highly self-actualized (Greenglass, 2006); Ryan and Frederick (1997) believe that the conditions necessary for self-actualization to take place— a greater internal locus of control (known as a belief that we have control over events and actions and that we therefore feel like a source of “origin” to what happens in our lives), and autonomy are quite literally energized by high vitality. Deci and Ryan (1991) also submit that having a robust level of subjective vitality enables aspects of their self-determination theory (encompassing our need for competence, autonomy and relatedness) to come to life. Pursuing autonomous activities that are motivated from within appears to be a recipe for boosting vitality (Ryan & Deci, 2008).

Living vitality-infused lives straddles both the hedonic and eudaimonic philosophies of well-being— perspectives that help guide our approaches of what it takes to flourish and live lives worth living. Ryan, Huta, & Deci’s (2008) hedonic perspective of human wellness encompasses pleasure, positive emotion, comfort, and the absence of negative emotion; enjoying a beach vacation provides an apt example. Living wider lives full of vitality and novelty certainly hits the high notes of a pleasurable life.

The eudaimonic approach to well-being includes an interest in meaning, purpose, and the development of strengths for a greater good (Peterson, 2006). While hedonic pleasures have been found to be both correlates to and outcomes of living eudaimonic lives (Ryan et al., 2008), eudaimonia takes into account the content and processes involved in living our best lives— inclusive of the intrinsic values and motivations that matter to us. Self-determination theory

helpfully differentiates the motives behind what we do as either intrinsic or extrinsic (Kasser & Ryan, 1996); given our needs to feel competent, able to act autonomously, and to relate to others, our hedonic desire to enjoy a gourmet meal, for example, might arise from an intrinsic motivation to experience a meaningful time with a friend, which would enhance eudaimonic well-being. Huta and Ryan (2010) found across four studies that hedonic and eudaimonic pursuits were equally associated with the heightened feeling of vitality and aliveness. Reflecting on death just might help ignite the self-determining aspects that lead to increased vitality.

Peterson and Seligman (2004) included *zest*—characterized by a resounding interest in and experience of vitality— as one of 24 character strengths in their VIA inventory of strengths. Embarking upon life wholeheartedly with anticipation and excitement, as though it was an adventure (Kashdan et al., 2017), zest epitomizes what it feels to be alive. A habitual approach to life with zesty enthusiasm and energy predicts overall life satisfaction, work satisfaction, and the belief that work is a calling (Peterson, Park, Hall, & Seligman, 2009). Zest-filled individuals are more likely to believe their lives are meaningful (Peterson, Ruch, Beerman, Park, & Seligman, 2007). When we're operating in high-vitality mode we're more productive, active, perform better and with more persistence (Ryan & Deci, 2008), and being actively engaged in our lives through activities we personally value is synonymous with well-being (Cantor & Sanderson, 2000). Employees with high vitality generate more creative thoughts and contribute more create solutions to problems (Kark & Carmeli, 2009). Building zest and vitality can be done through interventions that promote gratitude and savoring (Seligman, Steen, Park, & Peterson, 2005), which will be elaborated upon in our meaning discussion.

Vitality and zest have also been described as psychological energy (a resource we can harness for valuable action; Ryan & Deci, 2008), vigor (the interconnected feelings of cognitive

liveliness, emotional energy and physical strength; Shirom, 2007), engagement (the potent cocktail of vigor, dedication and absorption; Spreitzer, Fu Lam, & Fritz, 2010), exuberance (joy's more energetic cousin; Jamison, 2004), thriving (the marriage made in heaven of vitality and learning; Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005) and passion (a survival mechanism that keeps us interested in life; Levoy, 2014). East Asians refer to a vital force or spirit as *ch'i* (Chang, Chen, Chung & Holt, 2010), and the Japanese nod to *ki* as the "sense of vital potency and aliveness" and a "fervor of vitality" (Kumagai, 1988, p. 176).

While there are no shortages of ways to describe this construct of feeling alive, Seligman et al. (2005) highlighted the need for a "rigorous psychology of positive energy and zest" (p. 169) in light of the integral role that zest plays in creating lives worth living. Cultivating the strength of zest—housed within a family of VIA character strengths and virtues called *courage*—helps us to approach our mortality with the energy and bravery required to connect to the versions of our lives that are greater than the one's we're currently living (Peterson & Seligman, 2004). Memento mori interventions can help put our psychological energy and sense of aliveness in perspective, which just might trigger choices to live with more exuberance and *ki*.

Our willingness to fully participate in our lives, in rich and meaningful ways, tends to relegate the fear of death to the background (Wong & Tomer, 2011). This research has demonstrated that by dialing up the vitality, we appear to benefit from a dialing down of anxiety. A positive correlation exists between our fear of death and our sense that our lives are unlived; the more we fail to live our lives, the more profound our death anxiety becomes (Yalom, 1980). Spun more positively, the more we dive in and live our lives with gusto, the less we will experience anxiety about death.

Habits: The Blunting of Our Aliveness

“Some people die at 25 and aren’t buried until 75.” – Benjamin Franklin

For many of us, happiness can be found by engaging in habits and routines that are just that—habitual, routinized, predictable, and nestled in that comfort zone that feels right for a while... *until it doesn’t*. Many of us experience a paradox of happiness that tugs upon our simultaneous desire for control (Heintzelman & King, 2019) and our need for newness and the unexpected. Some of us have a sense that our comfort zones really aren’t all that comfortable anymore anyway, while for others our lives have issued more formal SOS calls—riddled with the anxiety that often accompanies boredom (Csikszentmihalyi, 2000)—to break out of our ruts. Regardless of whether we’ve been gently nudged or boldly alerted by boredom, we often feel stuck in the dull, monotonous versions that our lives have slipped into. Characterized by questions like, *“is this all there is?”* and the deep-seated admittance that *“I could be playing this game of life so much better,”* we know when we’re asleep at the proverbial switch of life, and often lack the momentum to turn the switch back on. It sometimes seems as though our fear of death is rivaled only by our fear of living.

All too often we succumb to doing the same thing day after day and week after week in pseudo-satisfying trances that we sometimes confuse as helpful habits. Many of us wonder, “Where did the month of April go?” because we’ve slipped into the warm embrace of a routine that felt comforting at first—a routine that let us control the chaos with a schedule that got us up each morning at the same time, eating the same cereal, taking the same route to work, etc. The routines that initially felt comforting started to dull our senses and rob us of the joys that novelty provides.

Habits, according to Aristotle, are the soul of mortality, while other thinkers over time (like Proust, Kant and Spinoza) have condemned them for providing a false sense of security, dulling our senses and essentially deadening our ability to experience life as though we were actually alive (Carlisle, 2014). How does habit cross the line from being a positive force that brings order to our lives something so potentially negative? The *double law of habit* introduced by the French philosopher Ravaillon helps us understand the inherent tension between active and passive routines; active habits refer to the orderly motions and good judgements made as a result of ritualized activity, while passive habits are the sometimes unfortunate side effects of the very efficiencies gained from being active: the numbing of our sensations, the familiarity that breeds contempt (Grosz, 2013).

We can be deliberate about designing our lives in ways that account for this alternating tension of yawning comfort vs. a healthy joie de vivre (zest for life). The exploration of boredom and its antidote of novelty can be paths towards vitality.

Boredom: The Further Blunting of Our Aliveness

“The average man does not know what to do with his life, yet wants another one which will last forever.” – Anatole France

One way to discover vitality is to understand *what it is not*. Boredom is a common emotion described as feeling simultaneously restless and unchallenged in the midst of a situation that serves no purpose (van Tilburg & Igou, 2012). Boredom is not just dullness with indifference, however; the restlessness is irritating and the lack of interest is nagging. Even more damning, some label boredom to be the emotional manifestation of a lack of meaning (Barbalet, 1999).

Boredom has been speculated to be a disruption to our intrinsic motivation process; when we’re feeling lackluster with life, the expectation from a well-tuned motivational system would be a healthy signal to introduce arousal through pursuit of intrinsic rewards (Weissinger, Caldwell, & Bandalos, 1992). Those with diminished intrinsic needs for self-determination and competence are less able to figure out what actions might actually satisfy their needs and remedy their boredom (Ryan & Deci, 2000). Reflecting on our mortality can help us tune into our intrinsic needs, disrupting our mundane routines and heightening our self-determined desires.

The ways we spend our time can lead to the optimal experience known as *flow*, the immersed psychological state associated with highly engaging activities (Csikszentmihalyi, 1990)—echoing the element of engagement found in Seligman’s (2011) PERMA model of well-being. Entering the flow zone ‘sweet spot’ is contingent on striking the balance between perceived challenges and perceived capacities, yet we spend a bulk of our free time in passive experiences that waste the opportunity to employ our skills and create the flow-like experiences that deliver a sense of satisfaction and control (Csikszentmihalyi, 1990). Only 16% of Americans

surveyed reported being swept up in intense flow-like experiences daily, while 42% admitted they rarely or never lose track of time while being engaged in an intensely involved activity (Nakamura & Csikszentmihalyi, 2003). An application of the character strength of zest, characterized by its energy that is both vigorous and in control (Peterson & Seligman, 2004), is useful in creating the right balance between challenge and skill in our free time to stave off boredom. Consciously activating temporal scarcity by considering our mortality might tune us into activities that create flow-like states, remedying the dilemma of boredom.

We can have full schedules and routines that keep us moving, but still feel mired in monotony. We can be busy being bored. 18 to 50% of us report feeling bored quite often (Klapp, 1986) and 71% of respondents in a market research study done by Yankelovich Partners admitted they yearned for more novelty in life (Kuntz, 2000).

If we find ourselves plagued by the thought that other people's Saturdays are surely more exciting than our own, that others are surely doing life better than we are, it might signal a desire to rumple up our routines. Annie Dillard (2013) famously said that "how we spend our days is, of course, how we spend our lives" (p. 32). Our lives are essentially a collection of hours and minutes and *what we do or don't do with them*. We have a myriad of ways to feel alive in our one and only lives, using novelty to our advantage.

Novelty

“The only difference between a rut and a grave are the dimensions.” – Ellen Glasgow

Novelty is the basic psychological need we have to experience “newness” and stray from the well-worn paths of routine. Novelty exists across all cultures and developmental stages; it is seen as a defining ingredient of intrinsic motivation, it acts as an antecedent and a booster shot to motivation, it increases well-being and it helps us function at our optimal best (González-Cutre, Sicilia, Sierra, Ferriz, & Hagger, 2016). Interestingly, the need for novelty has been proposed as a candidate for inclusion as a tenet of self-determination theory (González-Cutre et al., 2016), which as previously mentioned includes the aspects of autonomy, competence and relatedness (Deci and Ryan (1991).

Novelty is related to the constructs of interest, curiosity, perceived variety, and sensation seeking (González-Cutre et al., 2016). Interest is the fleeting emotion that motivates us to explore and learn; once we’ve explored and learned, we lose interest and move on to a new, novel exploration that has the right balance of being complex and comprehensible (Silvia, 2008). Fredrickson (2013) highlights that an indulgence in the positive emotion of interest motivates us to explore and learn, ultimately expanding the resource of knowledge in her broaden-and-build theory. This theory suggests that positive emotions like interest broaden our awareness, encourage novel perspectives and actions, and then build enduring beneficial resources (Fredrickson, 2013). Curiosity, by slight comparison, refers to the positive emotional-motivational phenomenon that fortuitously zeroes us in on novel opportunities to spark interest in the first place (Kashdan, Rose, & Fincham, 2004). Perceived variety is the positive stimulation we experience through unexpected, surprising, and varied events– like having a smorgasbord of

options to keep us engaged (González-Cutre et al., 2016), and sensation seeking, which involves a need for stimulation that's both intense and novel— sometimes accompanied by a willingness to take social or physical risks (Arnett, 1994).

As humans we're innately compelled to pursue new experiences, challenge ourselves in new ways, pontificate possible meanings, and explore new ideas, people, and places. Many of the novel experiences that we seek out complement our aspirations for self-determination (González-Cutre et al., 2016). The more willing we are to adopt a curious, novelty-seeking mindset, the likelier we are to flourish and thrive (Kashdan & Sylvia, 2009). Sheldon and Lyubomirsky (2012) have advised legions of positive psychology practitioners that variety can reduce the risk of hedonic adaptation. When we've slipped into the catatonic state of minimal aliveness, it appears as though a consistent, slow drip of novelty can help bring us back to life.

Living Life to Its DEEPEST: Making Meaning out of Memento Mori

We've discussed that living wider means we pleurably and comfortably enjoy the hedonic gifts that life has to offer... while flirting with the deeper eudaimonic side of life. Huta and Ryan (2010) have decisively connected the dots between eudaimonia and meaning, as have a cadre of positive psychologists over time—no less than Seligman (2002), and Ryan and Deci with their self-determination theory (2001). Living deeper, through the engagement of eudaimonic activities, is associated with greater connection to our values, meaning, and what are known as *elevating experiences* that ignite senses of awe, transcendence, and inspiration (Huta & Ryan, 2010).

The eudaimonic meaning that can arise from reflection of death isn't mutually exclusive from the hedonic benefits, either; both can co-exist and overlap quite amicably together (Huta & Ryan, 2010), and are valuable partners in a well-rounded life worth living. We will discuss the meaning and vital engagement that can arise from reflecting on death.

Meaning

Holocaust-surviving psychologist Victor Frankl (1963) believed that a meaningful life is ripe with action, infused with responsibility and accountability to find out what our lives are expecting from us— what our futures are expecting from us. He referred to the “will to meaning” as the center of human motivation and acknowledged that death is not just a factor in a meaningful life, but also a driver (1963). Wong (2010) takes this one step further by articulating that “we dread a meaningless life as much as we dread the terror of death” (p. 5). In our human

quest to be more than mere mortals, it involves a desire to live deeply; we will discuss the implications of how death awareness can create deep meaning and appreciation in life.

Meaning, one of the cornerstones of well-being according to Seligman (2011), isn't just sought after and found in the haze of a traumatic event, like Frankl surviving the adversity of the holocaust. Our desire for meaning is a fundamental part of being human, helping us to make sense of even the most banal everyday occurrences (like why we might have been overlooked for a promotion, or why a certain relationship is strained). Addressing existential topics like death, and finding meaning through that process, is a reality and recommended necessity for the average individual in the midst of everyday life in the absence of trauma (Koole, Greenberg, & Pyszczynski, 2004).

Deepak Chopra (2006) contends that our relationship with death defines the quality of how we live our lives today. Martela and Steger (2016) offer that meaning provides us with a sense of significance, sharpened by a belief that our lives are inherently valuable. "Meaning provides us with the sense that our lives matter, that they make sense, and that they are more than the sum of our seconds, days, and years" (Steger, 2012, p. 165).

Smith (2017) refers to the powerful effect of transcendence (one of her four pillars of meaning) as a way to reframe death as a component in a bigger cycle, especially for people who have undergone what is known as *ego death*—preparation for the final loss of self—in the midst of a transcendent experience. Death and meaning are positioned as two sides of the same coin in the powerful conclusion of Smith's (2017) book, inclusive of a reference to the *deathbed test* where we reflect on our lives from our imagined deathbeds. A self-transcendent aspect of meaning known as *generativity* has been shown to be the most powerful predictor of meaningfulness of all; people who are inspired to create and do things that will endure beyond

their death to find fulfillment, like mentoring children or donating money to a local library that will serve others for generations to come (Schnell, 2011).

On the topic of fulfillment, as humans we have been on a quest to reach idealized versions of our future potential selves since Maslow's (1968) introduction to self-actualization (Baumeister, 1987)—the pursuit of rich, fulfilled inner lives that set the stage for achieving the heavy-hitters of both meaning and purpose. Koestenbaum (1972) reinforces our modern shared human desire of finding meaning and fulfillment by asserting that the persistent anticipation of death is what puts a fine point on the purpose of our lives. The sense of urgency created from embracing the reality of death, whether it be near or far, is the very thing that can crystallize what the meaning of our respective lives truly are (Koestenbaum, 1972). The proverbial doctrines of existential psychology posit that our selves cannot be actualized without coming to terms with own personal demise (Feifel, 1990; Maslow, 1968).

Individuals who indicate suffering from a *crisis of meaning* on the Sources of Meaning in Life Questionnaire (SoMe)—a notable lack of meaning and frustrating emptiness in life—experience negative well-being and mental health (Schnell, 2009). Fredrickson et al.'s (2013) research finds that happy people with an absence of meaning possess similar gene patterns as those with adversity stress responses. This all stands in powerful contrast to research that finds those who assess themselves on the SoMe scale as high on *meaningfulness* to be positively correlated with increased subjective well-being and life satisfaction (Schnell, 2009). Similar results can be found from studies that show people with high purpose and meaning in life have commensurately accepting and positive attitudes towards death (Durlak, 1972; Quinn & Reznikoff, 1986); the degree to which we fear or accept death is intrinsically linked to the degree to which we've found meaning and purpose in life (Wong, Reker, & Gesser, 1994).

The aforementioned Meaning Management Theory (Wong, 2007) encourages us to use our awareness of death in a positive, agentic fashion to strive for meaning and full experiences in our lives, rather than defensively clamoring for meaning as a reaction to death anxiety (Rogers, 2011). The difference is subtle but profound; we have an opportunity to be intentional with what comes up when we reflect on death. By deliberately tackling the tough existential questions, we create opportunities for greater meaning (Koestenbaum, 1976).

Mindfulness-to-meaning theory refers to the mindful capturing and regulation of positive emotions to accomplish two compelling objectives: diminish the impact of adversity (known as positive reappraisal), and savor the positive experience (Garland, Farb, Goldin, & Fredrickson, 2015). Garland et al. (2015) believe that when we take negative or stressful circumstances—like considering the prospect of death—and reframe them as opportunities for growth or meaning, this cognitive strategy of positive reappraisal makes way for a eudaimonic life of meaning to take place. Mindfulness plays an active role in this theory because of its ability to flick off the switch of our conditioned, scripted responses to stressors (like denying the reality of death; Teasdale & Chaskalon, 2011) while creating the psychological space for mindset shifts to occur (Garland et al., 2015). Bryant and Smith (2015) touch on the savoring aspect of this mindfulness-to-meaning theory by suggesting a “savoring–meaning–savoring” cycle that arises from the act of initially savoring something that leads to a feeling of implied meaning, which then builds on itself to savor the meaning created. We can savor the fact that we likely have “x” decades left to live, find meaning in the activities we choose to pursue in that time, and then savor the very fact that we’ve found meaning.

In the face of mortality salience, studies have shown that people who believe their lives have a greater sense of purpose and meaning are able to bypass the typical death anxiety

response (Routledge & Juhl, 2010; Aronow, Rauchway, Peller, & DeVito, 1981). In other words, existential meaning inoculates us against existential despair (Routledge & Juhl, 2010) and even existential crisis; purpose-led people with life-threatening illnesses, for example, find even more depth in life, realize increases in self-esteem, and often experience personal transformations as they make new meaning in their limited time left (Yang, Staps, & Hijmans, 2010). Janoff-Bulman (2004) notes that post-traumatic growth survivors, for example, shift from having concerns about the meaning of life to the work of making meaning in life. As if more evidence was needed, Cozzolino, Blackie, and Meyers (2014) have determined from their research that confrontation of death leads to psychological growth and amplified meaning in life.

Vital Engagement

*“Go confidently in the direction of your dreams! Live the life you’ve imagined”
– Henry David Thoreau*

Positive psychologists are drawn to what it takes for us to flourish, and in unison with this pursuit is what Nakamura & Csikszentmihalyi (2003) describe as lives colored in with both absorbed enjoyment and meaning— their definition of vital engagement. This absorbing and meaningful relationship with life can be seen as a league of positive experience of its own (Nakamura, 2002).

Flow— the aforementioned state of interested absorption in an activity (Csikszentmihalyi, 1990)— can exist in the absence of meaning (like when playing an engrossing word game), but when perceived significance and flow theory combine forces, we’re poised to experience vital engagement (Nakamura and Csikszentmihalyi, 2003). We know that meaning can emerge as a result of “push” experiences (memento mori ah-ha’s, the death of someone close to us, minor and major traumas; Tedeschi & Calhoun, 2004), and yet there is also a “pull” model for the genesis of meaning that accounts for the enjoyable absorption of flow (Nakamura and Csikszentmihalyi, 2003). These researchers (2003) posit that the act of keenly exploring the world is the very thing that motivates us to keep coming back for even more flow-like experiences, and that long-term engagement in flow activities sows the seeds for meaning to then take root and bloom. Said simply, flow might create a pathway to meaning (Nakamura, 2002).

Vital engagement, and therefore meaning, can be obtained through activities that might initially be viewed as hedonic. The amount of time we devote to leisure—the discretionary endeavors that can optimize our sense of well-being (Freire, 2008)—has been shown as one of the more robust correlates of life satisfaction (Newman, Tay, & Diener, 2013). Leisure pursuits

have also been shown to play an important role in providing meaningful eudaimonic engagement in life through several interconnected themes (Iwasaki, Messina, & Hopper, 2018) that undoubtedly deepen our lives as well. According to Iwasaki, et al., (2018), leisure plays the meaningful roles of promoting *joyful lives* (ripe with the cultivation of positive emotions), *connected lives* (building relationships with others), *composed lives* (with more control and autonomy), *empowered lives* and *discovered lives*— the last of which leads to a life of meaning through the exploration and expression of our unique talents and strengths.

Deciding how we spend our leisure time is both intrinsically motivated and voluntarily initiated (Gallagher, Yancy, Swartout, Denissen, Kühnel, & Voils, 2012), leading to a heightened sense of self-determined autonomy (Kasser & Ryan, 1996). When applying the spirit of vitality to our discretionary time, we are better positioned to tune into our eudaimonic-laced intrinsic goals and feel a greater sense of self-actualization (Peterson & Seligman, 2004).

The concept of time affluence— the feeling that we have enough time to participate in the activities that truly matter to us— has also been shown to positively relate to subjective well-being (Kasser & Sheldon, 2009); people higher in time affluence reported spending more time engaged in personal growth activities, connecting with others, and participating in physical fitness activities (Kasser & Sheldon, 2009). Having too little leisure time leads to increased stress and yet having too much discretionary time erodes our sense of accomplishment and purpose (Sharif, Mogilner, & Hershfield, 2018); finding the ‘zest zone’ of discretionary time appears to be of paramount importance to optimize our well-being. What we know to be true about ontological confrontation is that it sparks a sense of temporal scarcity (King, Hicks, & Abdelkhalik, 2009), and that our priorities are more finely tuned in the face of a perceived expiry date on life (Carstensen, Isaacowitz, & Charles, 1999). By engaging in memento mori interventions, we can

reprioritize how we want to spend our time—picking up activities that can simultaneously bring us pleasure (like the hobby of learning how to paint) and also deepening meaning (by connecting with others at art class, gifting a portrait to a friend on her birthday, feeling a sense of accomplishment, etc.).

Yalom and Josselson (2014) similarly assert that engagement is the salve for the problem of meaninglessness; when we fully engage in a host of endeavors—like caring about people and projects, participating in activities to learn, grow and create new things—we fully *show up* in our lives. This commitment to life participation alleviates the nagging anxiety of lack of meaning, and more gutturally, the problem of life’s finitude. This decision to really take part in our lives is what makes the connection between vitality and meaning; by playing full out, and not sitting on the sidelines of our lives, we increase the feelings of being alive and consequently our perceptions of meaning.

Gratitude + Appreciation

Death can be the impetus to be thankful for what we have, and not to take things for granted. We're remarkably adaptive creatures, which can be equally frustrating and reassuring. Experts have provided an apt metaphor of the hedonic treadmill to describe how our happiness levels tend to remain static, even while on a fast-moving treadmill with a myriad of circumstances thrown at us along the journey (Kahneman, Diener & Schwartz, 1999). The treadmill tells us there really isn't a journey at all, in that we're squarely set in place despite the feelings we believe are going to run with us at 6.0 mph for a lifetime. We reliably adapt to the pleasures that were once fresh: the pride swell after a big promotion starts to deflate several months down the road. The excitement before a date with a new love interest slowly fades into 'date du jour'; even love can't outpace the hedonic treadmill's effect. Just as we walk mile after mile on the hedonic treadmill, we adapt to the condition of being alive. Who hasn't taken life for granted?

Appreciation is the acknowledgement of something's meaning and value, accompanied by a warm and fuzzy emotional connection to the very event, person, behavior or object being appreciated (Sansone & Sansone, 2010). Gratitude and appreciation appear to be overwhelmingly good for the human condition: they boost our mood in the short term (Watkins, Woodward, Stone, & Kolts, 2003) and predict well-being boosts in the long term (Watkins, Van Gelder, & Frias, 2009; Adler & Fagley, 2004).

Adler and Fagley (2005) surmise that appreciation consists of eight aspects, including a "*have*" focus instead of a "here's what I lack" focus; the transcendent emotion of *awe*; *rituals* that keep us aware of what we appreciate; a mindfulness of the *present moment*; *self/social comparisons* made against a downward reference point; *gratitude* that lets us acknowledge when

we've received a positive benefit; the *interpersonal* aspect of appreciating others in our lives; and finally and most relevant to our conversation together here is the aspect of *loss/adversity*—the appreciation of something in relation to the idea of losing it. These experiences highlight what we have taken for granted and can trigger “benefit-finding” adaptive beliefs about the consequences of the adversity, close calls, or perceived loss (Affleck & Tennen, 1996).

The Appreciation Inventory was developed by Adler and Fagley (2005), inclusive of *adversity/loss* subscale questions like “*Thinking about dying reminds me to live every day to the fullest,*” “*The thought of people close to me dying some day in the future makes me care more about them now,*” and “*I appreciate the things I have now, because I know that anything I have can be taken away from me at any given time.*” The subscales of *adversity/loss* and “*have*” *focus* had the strongest correlations to life satisfaction than the other six aspects of appreciation; those who were able to tap into experiences of loss or adversity were more likely to feel overall satisfaction with their lives (Adler & Fagley, 2005).

People confronted with life-threatening illnesses find themselves with a heightened appreciation for life (Taylor, 1983); mortality is a distinct mechanism that encourages us to assign greater value and appreciation for life (Janoff-Bulman & Berger, 2000).

Being grateful might help slow the adaptation treadmill down. Researchers believe that appreciative people possess the worldview that life is a gift, which makes them less likely to take their gift for granted and acclimate to the gift they've been given (McCullough, Emmons, & Tsang, 2002).

Existential Psychology + Psychotherapy Perspectives on Memento Mori

“Though the fact, the physicality, of death destroys us, the idea of death may save us” – Yalom (1989, p. 7).

Existential psychotherapy is a therapeutic practice centered around existential-philosophical principles—like exercising personal freedom, choice and responsibility amidst what is often described as the absurdity of the finite human condition, living authentically in the midst of said absurdity, and defining meaning in life while accepting our temporary existence (Correia, Cooper, Berdondini, & Correia, 2017). Van Deurzen-Smith (2012) refers to this special breed of counseling as “helping people come to terms with the dilemmas of living... after becoming aware of the emptiness and ignorance of their lives” (p. xiii). Understanding the nuances of this kind of therapy can be instructive when designing memento mori interventions for the average population of people experiencing their own dilemmas of living.

People typically seek out existential therapy because of a confrontation with death that’s propelled by a *boundary situation*—a more urgent scenario that thrusts death to front and center stage—like milestone anniversaries, birthdays that end with zeros, job loss or retirement, significant illness, and commitments to or separations from key relationships (Yalom, & Josselson, 2014).

For some of us, boundary situations have the power to create fundamental shifts in the way we live our lives; they are often seen as opportunities that lead us to our “gate of full existence” (Vos, 2018, p.149). Some patients in therapy report coming to terms that their “existence cannot be postponed” (Yalom, & Josselson, 2014, p. 22)—prioritizing a mindful way of living that savors the present moment instead of a “someday I’ll” approach to living *later*.

Many a tale has been told by therapists of terminally ill patients who have found meaning and growth *after* coming face to face with death, for example, wistful for not knowing what they know now *then* (Spiegel, 2015).

The mission of traditional existential therapies is to surmount existential distress in clients, so as to decrease or prevent psychopathology (Vos, Craig & Cooper, 2015). Given the incorporation of positive psychology into this discussion, we are interested in more than what traditional psychology has to offer in terms of reaching a baseline of a *lack of psychopathology*. Existential positive psychology, unsurprisingly, infuses existential themes into the science of positive psychology and its practices (Wong, 2017). The new frontier of positive psychology appears to appreciate the value of death acceptance through therapy and interventions (Wong & Tomer, 2011). Existential positive psychotherapy, thusly, asserts that death anxiety acts as the catalyst for personal growth (Wong, 2010).

Two main schools of thought in the realm of existential psychotherapy are centered around meaning humanistic approaches; we'll briefly discuss them below for the purposes of putting recommended interventions into context.

Meaning therapy—inspired by Frankl's (1988) therapeutic approach called logotherapy—focuses on one's meaning and purpose as the heart of a life worth living, in spite of what Wong (2009) describes as the tragic dimensions of life. This therapy, whose self-proclaimed motto is “meaning is all we need and relationship is all we have” (Wong, 2009, p. 86), helps us build meanings that both protect us from the inevitable pitfalls of life while simultaneously empowering us to awaken our potential for transformation (Wong, 2009). A meta-analysis on 60 clinical trials of meaning-centered therapies revealed their large effects on improving quality of life and psychological well-being, especially when the therapy sessions discussed multiple kinds

of meaning, incorporated mindfulness activities, and discussed the existential theme of death (Vos & Vitali, 2018).

Actively prospecting death provides an opportunity for us to envision hypothetical scenarios into our farthest futures possible (Seligman et al., 2013), engaging in a feature of consciousness known as narratization—our innate ability to see ourselves as the leading actors in the dramas of our lives (Jaynes, 1976, 2000). Consciously considering the transient nature of life primes us to narratize and cast ourselves in the best roles possible between now and our last days. Given that our capacity for narrative construction and meaning-making can do more than just ameliorate anxiety—it can transform our fears of death into self-actualization (Wong, 2010), meaning therapy often incorporates narrative therapy interventions (Wong, 2009).

The life review is another common exercise in this kind of existential therapy—the previously discussed practice of taking reminiscence one step further to use memories for educational and therapeutic benefits (Haber, 2006). Socratic dialogue is a hallmark of meaning therapy—the process of asking naïve questions that elicit more thoughtfulness, growth and therefore meaning (Martinez & Florez, 2015). Studies have demonstrated that patients in existential psychotherapy prefer directive, Socratic-style interventions that question, challenge or confront them to reflect on death, compared to a more passive approach (Watson, Cooper, McArthur, & McLeod, 2012).

Many existential therapies weave in a humanistic approach that introduces growth-oriented experiential interventions into the mix (Vos, Craig & Cooper, 2015)—focusing on possibilities, progress, strengths, self-care, and novel experiences (Elliott, Watson, Goldman & Greenberg, 2003). Recall the human potential movement's impact on death awareness as a means to reach our personal potentials (Vos, 2018). American psychologist Rollo May is

credited for shepherding a generation of existential therapists after importing European existential ideals to the US in the 1950s (Craig, Vos, Cooper, & Correia, 2016); he helped develop the humanistic approach of Irvin Yalom (1980), who introduced us to the four main existential fears he sought to help clients confront: mortality, freedom, aloneness and meaninglessness. Body awareness has also been introduced into experiential-existential approaches, like connecting with our breath to tune into our emotions (Craig, Vos, Cooper, & Correia, 2016).

Continuing on the humanistic theme, some versions of existential therapy focus less on guiding clients to face the cold, hard truths of the end, and instead focus on the cultivation of the emotion of awe: tapping into our sense of wonder, anxiety, thrill and the mystery of being alive (Schneider & Krug, 2010).

Structured group interventions can also bring meaning therapy alive, profoundly improving the quality of life for terminally ill individuals, for example (Breitbart et al., 2010). Vos, Craig and Cooper (2015) found in their meta-analysis of existential therapy interventions that group meaning therapy helped more participants find purpose in life while also building self-efficacy– as compared to those in a social support group, individual therapy or languishing on a waiting list. Group conversations about existential themes– like death– allow us to feel less alone as we face the ultimate unknown (Craig, Vos, Cooper, & Correia, 2016), and perhaps more inspired as we learn about others’ desires to live better lives.

Successful memento mori interventions would ideally draw from the existential psychotherapeutic techniques mentioned thus far: excavating the meaning of one’s life both with a practitioner and within a group setting (by identifying one’s purpose, goals, motivations and bucket-list goals), using mindfulness and an awareness of the body to identify emotions around

existential topics (participating in death reflection meditations akin to the Bhutanese tradition), using narrative construction exercises to prospect into the future and reflect on death (such as writing one's obituary, or journaling about possible regrets and life opportunities), cultivating awe to appreciate life (viewing awe-inspiring images or films from one's personal archives, or writing gratitude letters to others or one's self), and employing a Socratic questioning style to complete a life review (imaging life from one's death bed, completing a pre- and post-mortem on life).

Vos (2018) cautions that it might not be unilaterally wise for every client to courageously embrace existential matters like death, and that psychotherapists should use client-centered approaches to determine the relevance and application for each individual. In a world where we are sometimes "clumsy at living" (Van Deurzen-Smith, 2012, p. 30), opportunities abound for existential interventions... with care.

In Conclusion: A Few Dying Words

“Man is the only animal who has to be encouraged to live.” – Friedrich Nietzsche

The research appears conclusive: the *“World Death Rate Holding Steady at 100 Percent”* headline (The Onion, 1997) says it all.

While true that some might find focusing on *the end* of our days initially more morbid than meaningful, it undeniably allows us to appreciate the scarcity of the very time we’re looking to make the most out of (Janoff-Bulman, 2004). With the proverbial elephant of the grim reaper in the room, we’re able to make better choices of how we want to spend our time. We have the ability to prospect years into the future and fine-tune what we do with our lives in the very moments we’re living in (Seligman et al., 2013). With this agency to act on our prospected imaginations about the future, and the fact that our perceptions of time are malleable (Carstensen et al., 1999), there are immense implications of honoring the spirit of memento mori. We don’t need to loiter in the grim land of death for long, but a willingness to reflect on our final moments can help us live lives we’ll be proud of when it finally is our time to die.

Under the tenets of positive psychology, death acts as a powerful and healthy reminder to *live*. Reflecting on death is an intrinsically positive endeavor, after all, precisely because it is life affirming (Wong, 2010). This science of what makes life most livable encourages an optimistic appreciation of death that’s ostensibly planted in the living as opposed to the dying. Positive psychology inspires us to be grateful for the lives we’re fortunate enough to still have; it encourages us to get curious and ask what’s possible— in the face of our most existential adversity— to make the very most of our lives in the short time we’ve been given.

Noble advancements have been made across multiple disciplines that emphasize the science of *staying* alive, perhaps more so than the art and science of *being* alive. By deliberately zeroing in on the practice of memento mori, we can wake up to what matters and blast ourselves out of the “take it for granted,” autopilot zone. We can create vitality-filled width in our lives complemented by depth-filled meaning. Life is too short to be squandered with regrets about what could have been. On the other hand, life’s too long to feel monotonously uninspired, living one rote day after the other. Only as individuals do we know what it might take to make us feel less like empty zombies and more like people living lives we’d like to call our own. Let’s let death work its magic and motivate us to add more width and depth into our (hopefully long) lives. After all, our long-term prognosis is grim: life is short, and then we die. So let’s make it positively astonishing.

“Somebody should tell us, right at the start of our lives, that we are dying. Then we might live life to the limit, every minute of every day. Do it! I say. Whatever you want to do, do it now! There are only so many tomorrows.” – Pope Paul VI

References

- Adler, M., & Fagley, N. (2005). Appreciation: Individual differences in finding value and meaning as a unique predictor of subjective well-being. *Journal of Personality*, 73(1), 79–114. doi:10.1111/j.1467-6494.2004.00305.x
- Affleck, G., & Tennen, H. (1996). Construing benefits from adversity: Adaptational significance and dispositional underpinnings. *Journal of personality*, 64(4), 899-922. doi: 10.1111/j.1467-6494.1996.tb00948.x
- Alighieri, D. (1935). *The divine comedy of Dante Alighieri: Inferno, purgatory, paradise*. New York, NY: The Union Library Association.
- Ariés, P. (2000). *The hour of our death: The classic history of western attitudes toward death over the last one thousand years* (H. Weaver, Trans.). New York, NY: Knopf.
- Arnett, J. (1994). Sensation seeking: A new conceptualization and a new scale. *Personality and individual differences*, 16(2), 289-296. doi:10.1016/0191-8869(94)90165-1
- Aronow, E., Rauchway, A., Peller, M., & De Vito, A. (1981). The value of the self in relation to fear of death. *OMEGA - Journal of Death and Dying*, 11(1), 37–44. doi:10.2190/XJJ4-42YC-VYUB-A6PY
- Arndt, J., Vail, K. E., Cox, C., Goldenberg, J., Piasecki, T., & Gibbons, R. (2011). *Dying for a smoke: The interactive effect of mortality reminders and tobacco craving on smoking topography*. Unpublished manuscript, University of Missouri–Columbia. doi: 10.1037/a0029201
- Arndt, J., Schimel, J., & Goldenberg, J. L. (2003). Death can be good for your health: Fitness intentions as a proximal and distal defense against mortality salience. *Journal of Applied Social Psychology*, 33, 1726-1746. doi: 10.1111/j.1559-1816.2003.tb01972.x

- Aurelius, M. (2002). *Meditations: A new translation*. New York: Modern Library.
- Bannister, D., & Mair, J. (1968). *The evaluation of personal constructs*. London: Academic.
- Barbalet, J. (1999). Boredom and social meaning. *The British Journal of Sociology*, 50(4), 631–646. doi:10.1111/j.1468-4446.1999.00631.x
- Bassett, J., & Bussard, M. (2018). Examining the complex relation among religion, morality, and death anxiety: Religion can be a source of comfort and concern regarding fears of death. *Omega Journal of Death and Dying*. doi:10.1177/0030222818819343
- Baumeister, R.F. (1987). How the self became a problem: A psychological review of historical research. *Journal of Personality and Social Psychology*, 52, 163-176. doi: 10.1037/0022-3514.52.1.163
- Baumeister, R. F. (1994). The crystallization of discontent in the process of major life change. In T. F. Heatherton & J. L. Weinberger (Eds.), *Can personality change?* (p. 281–297). American Psychological Association. doi:10.1037/10143-012
- Baumeister, R. F., Vohs, K. D., Aaker, J. L., & Garbinsky, E. N. (2013). Some key differences between a happy life and a meaningful life. *The journal of positive psychology*, 8(6), 505-516. doi: 10.1080/17439760.2013.830764
- Becker, E. (1973). *The denial of death*. New York: Macmillan.
- Bengtson, V. L., Cuellar, J. B., & Ragan, P. K. (1977). Stratum contrasts and similarities in attitudes towards death. *Journal of Gerontology*, 32, pp. 76-88. doi: 10.1093/geronj/32.1.76
- Benjamin, L. (2003). Behavioral science and the Nobel Prize: A history. *The American Psychologist*, 58(9), 731–741. doi:10.1037/0003-066X.58.9.731

- Bernheim, B., Forni, L., Gokhale, J., & Kotlikoff, L. (2003). The mismatch between life insurance holdings and financial vulnerabilities: evidence from the health and retirement study. *The American Economic Review*, 93(1), 354–365.
doi:10.1257/000282803321455340
- Belmi, P., & Pfeffer, J. (2016). Power and death: Mortality salience increases power seeking while feeling powerful reduces death anxiety. *Journal of Applied Psychology*, 101(5), 702-720. doi:10.1037/apl0000076
- Bennett-Carpenter, B. (2017). Memento mori in art and literature. In *Death in Documentaries*, 306, 29-55. Brill Rodopi. doi: 10.1163/9789004356962_003
- Blanke O, & Dieguez S. (2015). Leaving body and life behind: Out-of-body and near-death experience. In S. Laureys, O. Gosseries, & G. Tononi (Eds.), *The neurology of consciousness: cognitive neuroscience and neuropathology* (pp. 323-343). San Diego, CA: Academic Press.
- Bond, G. (1980). Theravada Buddhism's meditations on death and the symbolism of initiatory death. *History of Religions*, 19(3), 237–258. doi:10.1086/462847
- Bourdin, P., Barberia, I., Oliva, R., & Slater, M. (2017). A virtual out-of-body experience reduces fear of death. *PloS one*, 12(1). doi: 10.1371/journal.pone.0169343
- Boyd, P., Morris, K.L., Goldenberg, J.L. (2017). Open to death: A moderating role of openness to experience in terror management. *Journal of Experimental Social Psychology*, 71, 117-127. doi: 10.1016/j.jesp.2017.03.003
- Bregman, L. (2010). *Religion, death and dying*. Santa Barbara, California: Praeger.
- Breitbart, W., Rosenfeld, B., Gibson, C., Pessin, H., Poppito, S., Nelson, C., Tomarken, A., Timm, A. K., Berg, A., Jacobson, C. & Sorger, B. (2010). Meaning-centered group

- psychotherapy for patients with advanced cancer: a pilot randomized controlled trial. *Psycho-oncology*, 19(1), 21-28. doi: 10.1002/pon.1556
- Breznitz, S. (1983). *Cry wolf*. Hillsdale, NJ: Lawrence Erlbaum.
- Bryan, J. F., & Locke, E. A. (1967). Parkinson's law as a goal setting phenomenon. *Organizational Behavior and Human Performance*, 2, 258-275. doi: 10.1016/0030-5073(67)90021-9
- Bryant, F., & Smith, J. (2015). Appreciating life in the midst of adversity: savoring in relation to mindfulness, reappraisal, and meaning. *Psychological Inquiry*, 26(4), 315–321. doi:10.1080/1047840X.2015.1075351
- Burge, K. (2017, December 27.) Virtual reality helps hospice workers see life and death through a patient's eyes. *NPR*. Retrieved from <https://www.npr.org/sections/health-shots/2018/12/27/675377939/enter-title>
- Burke, B. L., Martens, A., & Faucher, E. H. (2010). Two decades of terror management theory: A meta-analysis of mortality salience research. *Personality and Social Psychology Review*, 14(2), 155-195. doi: 10.1177/1088868309352321
- Campbell, J., Moyers, B. D., & Flowers, B. S. (1991). *The power of myth*. New York: Anchor Books.
- Cantor, N., & Sanderson, C. A. (2000). Life task participation and well-being: The importance of taking part in daily life. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 230-243). New York: Russell Sage.
- Carel, H. (2006). *Life and death in Freud and Heidegger*. New York: Rodopi.
- Carlisle, C. (2014). *On habit*. New York: Routledge.

- Carstensen, L. L. (2006). The influence of a sense of time on human development. *Science*, 312, 1913–1915. doi: 10.1126/science.1127488
- Carstensen, L., Isaacowitz, D., & Charles, S. (1999). Taking time seriously: A theory of socioemotional selectivity. *The American Psychologist*, 54(3), 165–181. doi:10.1037/0003-066X.54.3.165
- Carstensen, L. L., Fung, H. H., & Charles, S. T. (2003). Socioemotional selectivity theory and the regulation of emotion in the second half of life. *Motivation and Emotion*, 27, 103–123. doi: 10.1023/A:1024569803230
- Carver, C., & Scheier, M. (1990). Origins and function of positive and affect: A control-process view. *Psychological Review*, 97, 19-35. doi: 10.1037/0033-295X.97.1.19
- Castano, E., Leidner, B., Bonacossa, A., Nikkah, J., Perrulli, R., Spencer, B., & Humphrey, N. (2011). Ideology, fear of death, and death anxiety. *Political Psychology*, 32(4), 601–621. doi:10.1111/j.1467-9221.2011.00822.x
- Chang, H. C., Chen, L., Chung, J., & Holt, R. (2010). In search of a western counterpart of ch'i: Eastern and western cognitive frames in interpreting relevant ch'i terms. *China Media Research*, 6(1).
- Chopra, D. (2006). *Life after death: The burden of proof*. New York: Harmony.
- Choron, J. (1963). *Death and western thought*. New York: Macmillan Publishing Co.
- Cicirelli, V. (1998). Personal meanings of death in relation to fear of death. *Death Studies*, 22(8), 713–733. doi:10.1080/074811898201236
- Cicirelli, V. (2001). Personal meanings of death in older adults and young adults in relation to their fears of death. *Death Studies*, 25(8), 663–683. doi:10.1080/713769896

- Cope, J. (2003). Entrepreneurial learning and critical reflection: Discontinuous events as triggers for 'higher-level learning. *Management learning*, 34(4), 429-450.
doi:10.1177/1350507603039067
- Corless, I. B. (2003). An interview with Herman Feifel. *Illness, Crisis & Loss*, 11(1), 15–24. doi:10.1177/1054137302238950
- Corr, C., Corr, D., & Meagher, D. (2013). Historical and contemporary perspectives on loss, grief, and mourning. In D. K. Meagher & D. E. Balk (Eds.), *Handbook of thanatology the essential body of knowledge for the study of death, dying, and bereavement* (pp. 9-14). Routledge. doi:10.4324/9780203767306
- Correia, E., Cooper, M., Berdondini, L., & Correia, K. (2017). Characteristic practices of existential psychotherapy: A worldwide survey of practitioners' perspectives. *The Humanistic Psychologist*, 45(3), 217–237. doi:10.1037/hum0000061
- Cozzolino, P. (2006). Death contemplation, growth, and defense: Converging evidence of dual-existential systems? *Psychological Inquiry*, 17(4), 278–287.
doi:10.1080/10478400701366944
- Cozzolino, P., Blackie, L., & Meyers, L. (2014). Self-related consequences of death fear and death denial. *Death Studies*, 38(6), 418–422. doi:10.1080/07481187.2013.780110
- Cozzolino, P., Staples, A. D., Meyers, L. S. and Samboceti, J. (2004). Greed, death, and values: From terror management to “transcendence management” theory. *Personality and Social Psychology Bulletin*, 30, 278–292. doi: 10.1177/0146167203260716
- Craig, M., Vos, J., Cooper, M., & Correia, E. (2016). Existential psychotherapies. In D. Cain, K. Keenan, & S. Rubin (Eds.), *Humanistic psychotherapies handbook of research and*

- practice* (2nd ed., pp. 283–317). Washington, DC: American Psychological Association.
doi:10.1037/14775-010
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York, NY: Harper Perennial.
- Csikszentmihalyi, M. (2000). *Beyond boredom and anxiety*. Jossey-Bass.
- Daghamin, R. A. (2017, April). Reflection on death in the poetry of Emily Dickinson. *International Journal of Humanities and Social Science*, 7(4), 148-154.
- Danek, A. H., & Salvi, C. (2018). Moment of truth: Why Aha! experiences are correct. *The Journal of Creative Behavior*. doi: 10.1002/jocb.380
- Davidai, S., & Gilovich, T. (2018). The ideal road not taken: The self-discrepancies involved in people's most enduring regrets. *Emotion*, 18(3), 439–452. doi:10.1037/emo0000326
- De Botton, A., & Armstrong, J. (2013). *Art as therapy*. Phaidon Press.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.
- Deci, E. L., & Ryan, R. M. (1991). A motivational approach to self: Integration in personality. In R. A. Dienstbier (Ed.), *Nebraska Symposium on Motivation: Perspectives on motivation* (30 Vol., pp. 237-288). Lincoln: University of Nebraska Press.
- DeGenova, M. (1995). If you had to live your life over again: What would you do differently? In J. Hendricks (Ed.), *The meaning of reminiscence and life review* (pp. 99-106). Amityville, NY: Baywood Publishing. doi: 10.2190/DA9G-RHK5-N9JP-T6CC
- De Montaigne, M. (2018). *Michel de Montaigne-The Complete Essays*. New York, New York: Penguin Putman Inc.

- DeSpelder, L. A., & Strickland, A. L. (2013). Culture, socialization, and death education. In D. K. Meagher & D. E. Balk (Eds.), *Handbook of thanatology* (pp. 351-360). New York, NY: Routledge. doi: 10.4324/9780203767306-48
- Dezutter, J., Luyckx, K., & Hutsebaut, D. (2009). "Are you afraid to die?" Religion and death attitudes in an adolescent sample. *Journal of Psychology and Theology*, 37(3), 163–173. doi:10.1177/009164710903700302
- Dickens, C. (1905). *A Christmas carol*. New York, NY: Victor.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95(3), 542-565. doi: 10.1037/0033-2909.95.3.542
- Diener, E., Heintzelman, S., Kushlev, K., Tay, L., Wirtz, D., Lutes, L., & Oishi, S. (2017). Findings all psychologists should know from the new science on subjective well-being. *Canadian Psychology: Psychologie Canadienne*, 58(2), 87–104. doi: 10.1037/cap0000063
- Dillard, A. (2013). *The writing life*. New York, NY: Harper Perennial.
- Doka, K. J. (2013). Historical and contemporary perspectives on dying. In D. K. Meagher & D. E. Balk (Eds.), *Handbook of thanatology* (pp. 45-52). Routledge. doi: 10.4324/9780203767306-12
- Doka, K., Neimeyer, R., Wittkowski, J., Vallerger, M., & Currelley, L. (2016). Productivity in thanatology. *Omega Journal of Death and Dying*, 73(4), 340–354. doi:10.1177/0030222815590729
- Durlak, J. A. (1972). Relationship between individual attitudes toward life and death. *Journal of Consulting and Clinical Psychology*, 38(3), 463. doi: 10.1037/h0032854

- Dwyer, K., & Davidson, M. (2012). Is public speaking really more feared than death? *Communication Research Reports: CRR.*, 29(2), 99–107.
doi:10.1080/08824096.2012.667772
- Eastwood, J. D., Cavaliere, C., Fahlman, S. A., & Eastwood, A. E. (2007). A desire for desires: Boredom and its relation to alexithymia. *Personality and Individual Differences*, 42, 1035–1045. doi: 10.1016/j.paid.2006.08.027
- Elder, A. (2014). Zhuangzi on friendship and death. *The Southern Journal of Philosophy*, 52(4), 575–592. doi:10.1111/sjp.12086
- Elliott, R., Watson, J. C., Goldman, R. N., & Greenberg, L. S. (2003). *Learning emotion-focused therapy: The process-experiential approach to change*. Washington, DC: American Psychological Association.
- Erikson, E. H. (1950). *Childhood and society*. New York: Norton.
- Erikson, E. H. (1982). *The life cycle completed: Extended version with new chapters on the ninth stage of development by Joan M. Erikson*. New York, NY: W.W. Norton & Co.
- Evans, J. W., Walters, A. S., & Hatch-Woodruff, M. L. (1999). Deathbed scene narratives: A construct and linguistic analysis. *Death Studies*, 23(8), 715–733.
doi:10.1080/074811899200740
- Ersner-Hershfield, H., Mikels, J. A., Sullivan, S. J., & Carstensen, L. L. (2008). Poignancy: Mixed emotional experience in the face of meaningful endings. *Journal of Personality and Social Psychology*, 94(1), 158–167. doi:10.1037/0022-3514.94.1.158
- Feifel, H. (1959). *The Meaning of Death*. New York: McGraw-Hill.
- Feifel, H. (1969). Attitudes toward death: A psychological perspective. *Journal of Consulting and Clinical Psychology*, 33(3), 292–295. doi:10.1037/h0027565

- Feifel, H. (1990). Psychology and death: Meaningful rediscovery. *American Psychologist*, 45(4), 537-543. doi:10.1037/0003-066X.45.4.537
- Fonseca, L. M., & Testoni, I. (2012). The emergence of thanatology and current practice in death education. *OMEGA-Journal of Death and Dying*, 64(2), 157-169. doi: 10.2190/OM.64.2.d
- Forster, E. M. (1921). *Howard's end*. New York: Alfred A. Knopf.
- Frankl, V. E. (1963). *Man's search for meaning*. London, England: Hodder & Stoughton.
- Frankl, V. E. (1965). *The doctor and the soul*. New York, NY: Knopf.
- Frankl, V. E. (1988). *The will to meaning: Foundations and applications of logotherapy* (Rev. ed.). New York, NY: Plume.
- Fredrickson, B. (2009). *Positivity: Groundbreaking research reveals how to embrace the hidden strength of positive emotions, overcome negativity, and thrive*. New York, NY: Crown.
- Fredrickson, B. (2013). Positive emotions broaden and build. In *Advances in experimental social psychology*, (Vol. 47, pp. 1–53). doi:10.1016/B978-0-12-407236-7.00001-2
- Fredrickson, B., Grewen, K., Coffey, K., Algoe, S., Firestone, A., Arevalo, J., Ma, J., & Cole, S. (2013). A functional genomic perspective on human well-being. *Proceedings of the National Academy of Sciences of the United States of America*, 110(33), 13684–13689. doi:10.1073/pnas.1305419110
- Freire, T. (2018). Leisure and positive psychology: Contributions to optimal human functioning. *The Journal of Positive Psychology*, 13(1), 4-7. doi: 10.1080/17439760.2017.1374445
- Freud, S. (1918). *Reflections on war and death (annotated)*. (A. A. Brill & A. B. Kuttner, Trans.). New York, NY: Moffat, Yard and Co.

- Freud, S. (1922). *Beyond the pleasure principle* (C. J. M. Hubback, Trans.). London, Vienna: International Psycho-Analytical.
- Freud, S. (1961). Thoughts for the times on war and death. In J. Strachey (Ed. & Trans.), *The standard edition of the complete psychological works of Sigmund Freud*, (Vol. 19, pp. 3-66). London: Hogarth Press. (Original work published 1915).
- Frias, A., Watkins, P., Webber, A., & Froh, J. (2011). Death and gratitude: Death reflection enhances gratitude. *The Journal of Positive Psychology*, 6(2), 154–162.
doi:10.1080/17439760.2011.558848
- Furn, B. G. (1987) Adjustment and the near-death experience: A conceptual and therapeutic model. *Journal of Near-Death Studies*, 6, 4–19.
- Galfin, J., & Watkins, E. (2012). Construal level, rumination, and psychological distress in palliative care. *Psycho-Oncology*, 21(6), 680–683. doi:10.1002/pon.1948
- Gallagher, P., Yancy, W. S., Swartout, K., Denissen, J. J. A., Kühnel, A., & Voils, C. I. (2012). Age and sex differences in prospective effects of health goals and motivations on daily leisure-time physical activity. *Preventive Medicine*, 55(4), 322–324. doi: 10.1016/j.ypmed.2012.07.017
- Garland, E. L., Farb, N. A., Goldin, P. R., & Fredrickson, B. L. (2015). Mindfulness broadens awareness and builds eudaimonic meaning: A process model of mindful positive emotion regulation. *Psychological Inquiry*, 26, 293–314. doi:10.1080/1047840X.2015.1064294
- Gawande, A. (2014). *Being mortal: Medicine and what matters in the end*. New York, NY: Metropolitan Books, Henry Holt and Company.

- George L.S., & Park C.L. (2014). Existential mattering: Bringing attention to a neglected but central aspect of meaning? In A. Batthyany & P. Russo-Netzer (Eds.), *Meaning in positive and existential psychology* (pp. 39-51). New York, NY: Springer.
- Gesser, G., Wong, P., & Reker, G. (1988). Death attitudes across the life-span: The Development and validation of the death attitude profile (DAP). *Omega Journal of Death and Dying*, 18(2), 113–128. doi:10.2190/0DQB-7Q1E-2BER-H6YC
- Giddens, A. (1991). *Modernity and self-identity*. Cambridge, MA: Polity Press.
- Gilovich, T., Medvec, V. H. (1995). The experience of regret: What, when, and why. *Psychological Review*, 102, 379–395. doi: 10.1037/0033-295X.102.2.379
- Gorer, G. (1955). The pornography of death. *Encounter, Education for Meaning and Social Justice*, 5(4).
- González-Cutre, D., Sicilia, Á., Sierra, A., Ferriz, R., & Hagger, M. (2016). Understanding the need for novelty from the perspective of self-determination theory. *Personality and Individual Differences*, 102, 159–169. doi:10.1016/j.paid.2016.06.036
- Greenberg, J., Koole, S. L., & Pyszczynski, T. A. (Eds.). (2004). *Handbook of experimental existential psychology*. Guilford Press.
- Greenberg, J., Pyszczynski, T., & Solomon, S. (1986). The causes and consequences of the need for self-esteem: A terror management theory. In R. F. Baumeister (Ed.), *Public self and private self* (pp. 189-212). New York: Springer-Verlag.
- Greenberg, J., Pyszczynski, T., Solomon, S., Simon, L., & Breus, M. (1994). Role of consciousness and accessibility of death-related thoughts in mortality salience effects. *Journal of Personality and Social Psychology*, 67(4), 627–637. doi:10.1037/0022-3514.67.4.627

Greenberg, J., Solomon, S., & Pyszczynski, T. (1997). Terror management theory and research:

Empirical assessments and conceptual refinements. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 29, pp. 61-139). San Diego, CA: Academic Press.

doi: 10.1016/S0065-2601(08)60016-7

Greenglass, E. R. (2006). Vitality and vigor: Implications for healthy functioning. In P.

Buchwald (Ed.), *Stress and anxiety: Application to health, work place, community, and education* (p. 65–86). Cambridge Scholars Publishing.

Grosz, E. (2013). Habit today: Ravaisson, Bergson, Deleuze and us. *Body & Society*, 19(2-3),

217–239. doi:10.1177/1357034X12472544

Groth-Marnat, G., & Summers, R. (1998). Altered beliefs, attitudes, and behaviors following near-death experiences. *Journal of Humanistic Psychology*, 38(3), 110–125.

doi:10.1177/00221678980383005

Gunaratna, V. F. (1982). *Buddhist reflections on death*. Kandy: Buddhist Publication Society.

Haber, D. (2006). Life review: Implementation, theory, research, and therapy. *International Journal of Aging and Human Development*, 63(2) 153-171. doi: 10.2190/DA9G-RHK5-

N9JP-T6CC

Haidt, J. (2006). *The happiness hypothesis*. New York: Basic Books.

Hamermesh, D. S., & Lee, J. (2007). Stressed out on four continents: Time crunch or yuppie

kvetch? *The Review of Economics and Statistics*, 89(2), 374-383. doi:

10.1162/rest.89.2.374

Harmon-Jones, E., Simon, L., Greenberg, J., Pyszczynski, T., Solomon, S., & McGregor, H.

(1997). Terror management theory and self-esteem: Evidence that increased self-esteem

- reduced mortality salience effects. *Journal of Personality and Social Psychology*, 72, 24–36. doi: 10.1037/0022-3514.72.1.24
- Hayakasi, E. (2013, October 25). *Death is having a moment*. The Atlantic. Retrieved from <https://www.theatlantic.com/health/archive/2013/10/death-is-having-a-moment/280777/>
- Hayes, A. M., Laurenceau, J. P., Feldman, G., Strauss, J. L., & Cardaciotto, L. (2007). Change is not always linear: the study of nonlinear and discontinuous patterns of change in psychotherapy. *Clinical psychology review*, 27(6), 715–723. doi:10.1016/j.cpr.2007.01.008
- Heidegger, M. (1962). *Being and time* (J. Macquarrie & E. Robinson, Trans.). New York: Basic Books.
- Heine, S. J., Proulx, T., & Vohs, K. D. (2006) The meaning maintenance model: On the coherence of social motivation. *Personality and Social Psychological Review*, 10(2), 88-111. doi:10.1207/s15327957pspr1002_1
- Heintzelman, S., & King, L. (2019). Routines and meaning in life. *Personality & Social Psychology Bulletin*, 45(5), 688–699. doi:10.1177/0146167218795133
- Hoelter, J.W., & Hoelter, J.A. (1978). The relationship between fear of death and anxiety. *The Journal of Psychology*, 99(2), 225-226. doi:10.1080/00223980.1978.9921462
- Hoffman, I. Z. (1998). *Ritual and spontaneity in the psychoanalytic process: A dialectical-constructivist view*. Hillsdale, NJ: The Analytic Press.
- Holcomb, L., Neimeyer, R., & Moore, M. (1993). Personal meanings of death: A content analysis of free-response narratives. *Death Studies*, 17(4), 299–318. doi:10.1080/07481189308252627
- Horace. (23 BC). *Odes*, I.1, 1.11. Retrieved from [https://en.wikipedia.org/wiki/Odes_\(Horace\)](https://en.wikipedia.org/wiki/Odes_(Horace))

- Huang, Z. T., & Wyer, R. S., Jr. (2015). Diverging effects of mortality salience on variety seeking: The different roles of death anxiety and semantic concept activation. *Journal of Experimental Social Psychology*, 58, 112-123. doi: 10.1016/j.jesp.2015.01.008
- Huta, V., & Ryan, R. (2010). Pursuing pleasure or virtue: The differential and overlapping well-being benefits of hedonic and eudaimonic motives. *Journal of Happiness Studies*, 11(6), 735–762. doi:10.1007/s10902-009-9171-4
- Hyde, A., Maher, J., & Elavsky, S. (2016). Enhancing our understanding of physical activity and wellbeing with a lifespan perspective. *International Journal of Wellbeing*, 3(1), 98–115. doi: 10.5502/ijw.v3i1.6
- Irwin, H. J. (1988). Out-of-body experiences and attitudes to life and death. *Journal of the American Society for Psychical Research*, 82(3), 237-251.
- Iwasaki, Y., Messina, E.S., & Hopper, T. (2018). The role of leisure in meaning-making and engagement with life. *The Journal of Positive Psychology*, 13(1), 29-35. doi:10.1080/17439760.2017.1374443
- Jonas, E., Schimel, J., Greenberg, J., & Pyszczynski, T. (2002). The Scrooge effect: Evidence that mortality salience increases prosocial attitudes and behavior. *Personality and Social Psychology Bulletin*, 28(10), 1342–1353. doi:10.1177/014616702236834
- Ivtzan, I., Lomas, T., Hefferon, K., & Worth, P. (2015). *Second wave positive psychology: Embracing the dark side of life*. London, England: Routledge.
- Jamison, K. R. (2004). *Exuberance: The passion for life*. New York: Knopf.
- Janoff-Bulman, R. (2004). Posttraumatic growth: Three explanatory models. *Psychological Inquiry*, 15(1).

- Janoff-Bulman, R., & Berger, A. R. (2000). The other side of trauma: Towards a psychology of appreciation. In J. H. Harvey & E. D. Miller (Eds.), *Loss and trauma: General and close relationship perspectives* (p. 29–44). Brunner-Routledge.
- Janoff-Bulman, R., & Yopyk, D. J. (2004). Random outcomes and valued commitments existential dilemmas and the paradox of meaning. In Pyszczynski, T., Greenberg, J., & Koole, S. L. (Eds.), *Handbook of experimental existential psychology* (p.122-140). New York, NY: The Guilford Press.
- Juhl, J., & Routledge, C. (2010). Structured terror: Further exploring the effects of mortality salience and personal need for structure on worldview defense. *Journal of Personality*, 78(3), 969–990. doi: 10.1111/j.1467-6494.2010.00639.x
- Juhl, J., & Routledge, C. (2016). Putting the terror in terror management theory: Evidence that the awareness of death does cause anxiety and undermine psychological well-being. *Current Directions in Psychological Science*, 25(2), 99–103.
doi:10.1177/0963721415625218
- Kagan, Shelly. (2012). *Death*. New Haven: Yale University Press.
- Kahneman, D., Diener E. & Schwartz, N. (1999). *Well-being: Foundations of hedonic psychology*. New York, NY: Russell Sage Foundation.
- Kark, R., & Carmeli, A. (2009). Alive and creating: the mediating role of vitality and aliveness in the relationship between psychological safety and creative work involvement. *Journal of Organizational Behavior*, 30(6), 785–804. doi:10.1002/job.571
- Kashdan, T. B., Blalock, D. V., Young, K. C., Machell, K. A., Monfort, S. S., McKnight, P. E., & Ferssizidis, P. (2018). Personality strengths in romantic relationships: Measuring

- perceptions of benefits and costs and their impact on personal and relational well-being. *Psychological assessment*, 30(2), 241. doi: 10.1037/pas0000464
- Kashdan, T. B., Rose, P., & Fincham, F. D. (2004). Curiosity and exploration: Facilitating positive subjective experiences and personal growth opportunities. *Journal of personality assessment*, 82(3), 291-305. doi: 10.1207/s15327752jpa8203_05
- Kashdan, T. B., & Silvia, P. J. (2009). Curiosity and interest: The benefits of thriving on novelty and challenge. In C. R. Snyder & S. J. Lopez (Eds.), *Oxford handbook of positive psychology* (Vol 2, pp. 367-374). New York, NY: Oxford University Press.
- Kasser, T. & Ryan, R.M. (1996). Further examining the American dream: Differential correlates of intrinsic and extrinsic goals. *Personality and Social Psychology Bulletin*, 22, 280–287. doi: 10.1177/0146167296223006
- Kasser, T., & Sheldon, K. (2009). Time affluence as a path toward personal happiness and ethical business practice: Empirical evidence from four studies. *Journal of Business Ethics*, 84, 243-255. doi: 10.1007/s10551-008-9696-1
- Kastenbaum, R. (1994). Deathbed scenes. In R. Kastenbaum (Ed.), *The psychology of death* (2nd ed., pp. 2-47). New York: Springer Publishing Company.
- Kastenbaum, R. (1995). *Death, society and human experience* (5th ed.). Boston: Allyn and Bacon.
- Kastenbaum, R. (2000). *The psychology of death* (3rd ed.). New York: Springer.
- Kastenbaum, R. (2003). Is Death the Spice of Life? *Illness, Crisis & Loss*, 11(1), 74–89. doi:10.1177/1054137302238955
- Kastenbaum, R. (2004). *On our way: The final passage through life and death*. Los Angeles, California: University of California Press.

- Kauffman, J. (1005). *Awareness of mortality*. Amityville, NY: Baywood.
- Kazantzakis, N. (1952). *Zorba the Greek*: Simon and Schuster.
- Kelley, G. (1955). *The psychology of personal constructs*. New York: W. W. Norton.
- Kim, K., Zauberman, G., & Bettman, J. (2011). The impact of perceived temporal scarcity of life on temporal distance judgments. *Advances in Consumer Research*, 39, 255.
- King, L.A. (2001). The hard road to the good life. *Journal of Humanistic Psychology*, 41(1), 51–72. doi: 10.1177/0022167801411005
- King, L., Hicks, J., & Abdelkhalik, J. (2009). Death, life, scarcity, and value: An alternative perspective on the meaning of death. *Psychological Science: A Journal of the American Psychological Society*, 20(12), 1459–1462. doi:10.1111/j.1467-9280.2009.02466.x
- Klapp, O. E. (1986). *Overload and boredom: Essays on the quality of life in the information society*. New York: Greenwood Press.
- Koestenbaum, P. (1972). The vitality of death. *Omega Journal of Death and Dying*, 2(4), 253–271. doi:10.2190/BXMU-81HF-FVLL-0MGQ
- Koestenbaum, P. (1976). *Is there an answer to death?* Englewood Cliffs, NJ: Prentice-Hall.
- Koole, S. L., Greenberg, J. & Pyszczynski, T. (2004). The best of two worlds: Experimental existential psychology now and in the future. In Pyszczynski, T., Greenberg, J., & Koole, S. L. (Eds.), *Handbook of experimental existential psychology* (pp. 503-511). New York, NY: The Guilford Press.
- Kopczuk, W., & Slemrod, J. (2005). Denial of death and economic behavior. *Advances in Theoretical Economics*, 5(1). doi: 10.2202/1534-5963.1207

- Kosloff, S., Greenberg, J. (2009). Pearls in the desert: Death reminders provoke immediate derogation of extrinsic goals, but delayed inflation. *Journal of Experimental Social Psychology*, 45, 197-203. doi: 10.1016/j.jesp.2008.08.022
- Kubler-Ross, E. (1969). *On death and dying*. New York, NY: Macmillan.
- Kuhl, D. (2002). *What dying people want: Practical wisdom for the end of life*. New York: Public Affairs.
- Kumagai, H. (1988). KI: The 'fervor of vitality' and the subjective self. *Symbolic Interaction*, 11(2), 175-190. doi:10.1525/si.1988.11.2.175
- Kuntz, T. (2000, February 20). Word for word/boredom; yawn: These are such exciting times. *New York Times*. Retrieved from <https://www.nytimes.com/2000/02/20/weekinreview/word-for-word-boredom-yawn-these-are-such-exciting-times.html>
- Kurtz, J. (2008). Looking to the future to appreciate the present: The benefits of perceived temporal scarcity. *Psychological Science*, 19(12), 1238-1241. doi: 10.1111/j.1467-9280.2008.02231.x
- Lachs, J. (2005). Stoic pragmatism. *The Journal of Speculative Philosophy* 19(2), 95-106. doi:10.1353/jsp.2005.0012.
- Lavoie, J., & de Vries, B. (2004). Identity and death: an empirical investigation. *Omega Journal of Death and Dying*, 48(3). doi: 10.2190/H2K9-15Q7-U7Q5-3CQA
- Lazarus, R. S. (1991). *Emotion and adaptation*. New York: Oxford University Press.
- Leland, J. (2018, June 22). The positive death movement comes to life. *The New York Times*. Retrieved from <https://www.nytimes.com/2018/06/22/nyregion/the-positive-death-movement-comes-to-life.html>

- Lennon, J., & Continuum, M. F. (2002). Dark tourism: the attraction of death and disaster. *Annals of Tourism Research*, 29(4), 1188-1189.
- Levoy, G. (2014). *Vital signs: The nature and nurture of passion*. New York: Penguin Random House LLC.
- Lifton, R. J. (1975). On death and the continuity of life: A psychohistorical perspective. *OMEGA - Journal of Death and Dying*, 6(2), 143–159. doi:10.2190/1E3D-35H3-644D-3A6K
- Linley, P. A., & Joseph, S. (2004). Positive change following trauma and adversity: A review. *Journal of Traumatic Stress*, 17, 11-21. doi: 10.1023/B:JOTS.0000014671.27856.7e
- Liu, W., & Aaker, J. (2007). Do you look to the future or focus on today? The impact of life experience on intertemporal decisions. *Organizational Behavior and Human Decision Processes*, 102(2), 212-225. doi: 10.1016/j.obhdp.2006.02.004
- Llewellyn, N. (2013). *Art of death: Visual culture in the English death ritual c. 1500- c. 1800*. London, England: Reaktion Books.
- Lomas, T. (2016). Positive psychology – the second wave. *The Psychologist*, 29, 536-539.
- Lukianoff, G., & Haidt, J. (2018). *The coddling of the American mind: How good intentions and bad ideas are setting up a generation for failure*. New York: Penguin Press.
- Luper, S. (2009). *The philosophy of death*. Cambridge: Cambridge University Press.
doi:10.1017/CBO9780511627231
- Martela, F., & Steger, M. F. (2016). The three meanings of meaning in life: Distinguishing coherence, purpose, and significance. *Journal of Positive Psychology*, 11(5), 531-545.
doi: 10.1080/17439760.2015.1137623
- Martin, L. L., Campbell, W. K., Henry, C. D. (2004). The roar of awakening: Mortality acknowledgement as a call to authentic living. In Greenberg, J., Koole, S. L.,

- Pyszczynski, T. (Eds.), *Handbook of experimental existential psychology* (pp. 431-448). New York, NY: Guilford.
- Martínez, E., & Flórez, I. (2015). Meaning-centered psychotherapy: A socratic clinical practice. *Journal of Contemporary Psychotherapy*, 45(1), 37–48. doi:10.1007/s10879-014-9281-0
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50, 370-396. doi:10.1037/h0054346
- Maslow, A. H. (1968). *Toward a psychology of being*. New York: Van Nostrand.
- Mason, J. (2015, January 31). Death and its concept. *The Philosopher's Magazine*. Retrieved from <https://www.philosophersmag.com/opinion/17-death-and-its-concept>.
- May, R. (1969). *Love and will*. New York: Norton.
- McCarthy, J. (2018, February 12). The birthplace of 'gross national happiness' is growing a bit cynical. *NPR*. Retrieved from <https://www.npr.org/sections/parallels/2018/02/12/584481047/the-birthplace-of-gross-national-happiness-is-growing-a-bit-cynical>
- McCullough, M., Emmons, R., & Tsang, J. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology*, 82(1), 112–127. doi:10.1037/0022-3514.82.1.112
- McManus, R. (2013). *Death in a global age*. London: Palgrave Macmillan.
- Mellor, P., & Shilling, C. (1993). Modernity, self-identity and the sequestration of death. *Sociology: The Journal of the British Sociological Association*, 27(3), 411–431. doi:10.1177/0038038593027003005

- Mezirow, J. (1990). How critical reflection triggers transformative learning. *Fostering critical reflection in adulthood*, 1(20), 1-6.
- Mikulincer, M., & Florian, V. (2000). Exploring individual differences in reactions to mortality salience: Does attachment style regulate terror management mechanisms? *Journal of Personality and Social Psychology*, 79(2), 260–273. doi: 10.1037/0022-3514.79.2.260
- Miller, W. (2004). The phenomenon of quantum change. *Journal of Clinical Psychology*, 60(5), 453–460. doi:10.1002/jclp.20000
- Mitsis, P. (2012). When death is there, we are not: Epicurus on pleasure and death. In B. Bradley, F. Feldman, & J. Johansson (Eds.), *The Oxford handbook of philosophy of death* (pp. 200-217). New York, NY: Oxford University Press.
doi:10.1093/oxfordhb/9780195388923.013.0009
- Morrison, M., & Roese, N. J. (2011). Regrets of the typical American: Findings from a nationally representative sample. *Social Psychological and Personality Science*, 2(6), 576–583. doi:10.1177/1948550611401756
- Moore, W. E. (1963). Time the ultimate scarcity: Temporal allocations the temporal order life "management". *The American Behavioral Scientist (Pre-1986)*, 6(9), 58. doi: 10.1177/000276426300600917
- Mueck, R. (2017). Mass [online image]. Photo credit Sean Fennessey. Retrieved from <https://mymodernmet.com/ron-mueck-mass-skull-sculptures/>
- Myrick, J. (2017). Public perceptions of celebrity cancer deaths: How identification and emotions shape cancer stigma and behavioral intentions. *Health Communication*, 32(11), 1385–1395. doi:10.1080/10410236.2016.1224450

- Nakamura, J. (2002). The nature of vital engagement in adulthood. *New Directions for Child and Adolescent Development*, 2001(93). doi:10.1002/cd.21
- Nakamura, J., & Csikszentmihalyi, M. (2003). The construction of meaning through vital engagement. In Keyes, C., Haidt, J. (Eds.), *Flourishing: Positive psychology and the life well-lived* (pp. 83–104). Washington, DC, US: American Psychological Association. doi:10.1037/10594-004
- Naughton, J. (2011, October 8). Steve Jobs: Stanford commencement address, June 2005. *The Guardian*. Retrieved from <https://www.theguardian.com/technology/2011/oct/09/steve-jobs-stanford-commencement-address>
- Neimeyer, R. A. (1985). Actualization, integration and fear of death: A test of the additive model. *Death Studies*, 9, 235-250.
- Neimeyer, R., Currier, J., Coleman, R., Tomer, A., & Samuel, E. (2011). confronting suffering and death at the end of life: The impact of religiosity, psychosocial factors, and life regret among hospice patients. *Death Studies*, 35(9), 777–800. doi:10.1080/07481187.2011.583200
- Neimeyer, R. A., Moser, R. P., & Wittkowski, J. (2003). Assessing attitudes toward dying and death: Psychometric considerations. *OMEGA - Journal of Death and Dying*, 47(1), 45–76. doi:10.2190/EP4R-TULM-W52G-L3EX
- Neimeyer, R. A., Wittkowski, J., & Moser, R. P. (2004). Psychological research on death attitudes: An overview and evaluation. *Death studies*, 28(4), 309-340. doi: 10.1080/07481180490432324
- Nietzsche, F. W. (1896). *Thus Spake Zarathustra—A book for all and none* (A. Tille, Trans.). New York: Macmillan.

- Neugarten, B.L. (1969). *Middle-age and aging*. Chicago, IL: University of Chicago Press.
- Newman, D. B., Tay, L., & Diener, E. (2014). Leisure and subjective well-being: A model of psychological mechanisms as mediating factors. *Journal of Happiness Studies*, 15(3), 555-578. doi: 10.1007/s10902-013-9435-x
- Novotney, A. (2010, October). The living will needs resuscitation. *Monitor on Psychology*, 41(9), 66.
- Noyes Jr., R. (1983). The human experience of death or, what can we learn from near-death experiences? *OMEGA-Journal of Death and Dying*, 13(3), 251-259. doi: 10.2190/DKHY-N1C3-XXA0-G7M5
- Ōbayashi, H. (1992). *Death and afterlife: perspectives of world religions*. New York: Greenwood Press.
- Oren, G., Shani, A., & Poria, Y. (2019). Mortality salience – shedding light on the dark experience. *Journal of Heritage Tourism*, 14(5-6), 574-578. doi:10.1080/1743873X.2019.1585438
- Pacholski, R. A. (1986). Death themes in the visual arts: Resources and research opportunities for death educators. *Death Studies*, 10(1), 59-74.
- Parkes, C. M., Laungani, P. & Young, B. (2015). Introduction. In B. Young, C. M. Parkes, & P. Laungani (Eds.), *Death and bereavement across cultures* (pp. 3-8). London and New York: Routledge.
- Pausch, R. (2007). Randy Pausch's last lecture: Really achieving your childhood dreams. *Carnegie Mellon*. Retrieved from <https://www.cs.cmu.edu/~pausch/Randy/pauschlastlecturetranscript.pdf>

- Penfold-Mounce, R. (2019). Mortality and culture: Do death matters matter? In T. Holmberg, A. Jonsson, & F. Palm (Eds.), *Death matters* (pp. 265-279). Palgrave Macmillan, Cham.
- Peterson, C. (2006). *A primer in positive psychology*. New York, NY: Oxford University Press.
- Peterson, C., & Chang, E. (2003). Optimism and flourishing. In C.L. Keyes & J. Haidt, (Eds.), *Flourishing: Positive psychology and the life well-lived* (pp. 55–79). Washington, DC, US: American Psychological Association. doi:10.1037/10594-003
- Peterson, C., Park, N., Hall, N., & Seligman, M. E. P. (2009). Zest and work. *Journal of Organizational Behavior*, 30(2), 161–172. doi:10.1002/job.584
- Peterson, C., Ruch, W., Beerman, U., Park, N., & Seligman, M. E. P. (2007). Strengths of character, orientations to happiness, and life satisfaction. *Journal of Positive Psychology*, 2(3), 149–156. doi: 0.1080/17439760701228938
- Peterson, C. & Seligman, M. E. P. (2003). Character strengths before and after September 11. *Psychological Science*, 14, 381-384. doi: 10.1111/1467-9280.24482
- Peterson, C. & Seligman, M. E. P. (2004). *Character strengths and virtues*. New York, NY: Oxford University Press and Washington: American Psychological Association Press.
- Prilleltensky, I. (2016). *The laughing guide to well-being: Using humor and science to become happier and healthier*. Lanham, MD: Rowman and Littlefield.
- Proulx, T., & Heine, S. (2006). Death and black diamonds: Meaning, mortality, and the meaning maintenance model. *Psychological Inquiry*, 17(4), 309–318. doi:10.1080/10478400701366985
- Pyszczynski, T., Greenberg, J., Solomon, S., & Maxfield, M. (2006). On the unique psychological import of the human awareness of mortality: Themes and variations. *Psychological Inquiry*, 17, 328–356. doi.org/10.1080/10478400701369542

- Quigley, C. (2005). *The corpse: A history*. Jefferson, North Carolina: McFarland.
- Quinn, P., & Reznikoff, M. (1986). The relationship between death anxiety and the subjective experience of time in the elderly. *The International Journal of Aging & Human Development*, 21(3), 197–210. doi:10.2190/57D4-NUJQ-G4K1-NBC7
- Reb, J. (2008). Regret aversion and decision process quality: Effects of regret salience on decision process carefulness. *Organizational Behavior and Human Decision Processes*, 105, 169–182. doi: 10.1016/j.obhdp.2007.08.006
- Reivich, K., & Shatte, A. (2003). *The resilience factor: 7 keys to finding your inner strength and overcoming life's hurdles*. New York, NY: Broadway Books.
- Rogers, C. R. (1959). A theory of therapy, personality, and interpersonal relationships, as developed in the client-centered framework. In S. Koch (Ed.), *Psychology: A study of a science* (Vol. 3, pp. 184-256). New York: McGraw-Hill.
- Rogers, C. R. (1980). *A way of being*. Boston: Houghton-Mifflin.
- Rogers, R. (2011). Conceptualizing death in a worldview consistent, meaningful way and its effects on worldview defense. *Death Studies*, 35(2), 107–123.
doi:10.1080/07481187.2011.535379
- Routledge, C., Arndt, J., Goldenberg, J. L. (2004). A time to tan: Proximal and distal effects of mortality salience on sun exposure intentions. *Personality and Social Psychology Bulletin*, 30, 1347-1358. doi: 10.1016/j.obhdp.2007.08.006
- Routledge, C., & Juhl, J. (2010). When death thoughts lead to death fears: Mortality salience increases death anxiety for individuals who lack meaning in life. *Cognition and Emotion*, 24(5), 848-854. doi:10.1080/02699930902847144

- Rowett, C. (2018). *Knowledge and truth in Plato: Stepping past the shadow of Socrates*. Oxford, United Kingdom: Oxford University Press.
- Rutt, J. L., & Löckenhoff, C. E. (2016). From past to future: Temporal self-continuity across the life span. *Psychology and aging*, 31(6), 631–639. doi:10.1037
- Ryan, R., & Deci, E. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *The American Psychologist*, 55(1), 68–78. doi:10.1037/0003-066X.55.1.68
- Ryan, R., & Deci, E. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141–166. doi:10.1146/annurev.psych.52.1.141
- Ryan, R., & Deci, E. (2008). From ego depletion to vitality: Theory and findings concerning the facilitation of energy available to the self. *Social and Personality Psychology Compass*, 2(2), 702–717. doi:10.1111/j.1751-9004.2008.00098.x
- Ryan, R., & Frederick, C. (1997). On energy, personality, and health: Subjective vitality as a dynamic reflection of well-being. *Journal of Personality*, 65(3), 529–565. doi:10.1111/j.1467-6494.1997.tb00326.x
- Ryan, R., Huta, V., & Deci, E. (2008). Living well: A Self-determination theory perspective on eudaimonia. *Journal of Happiness Studies*, 9, 139–170. doi: 10.1007/s10902-006-9023-4
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069–1081. doi: 10.1037/0022-3514.57.6.1069

- Ryff, C. D. & Keyes, C. L. M. (1995). The structure of psychological well-being, revisited. *Journal of Personality and Social Psychology*, 69, 714-727. doi: 10.1037/0022-3514.69.4.719
- Saffrey, C., Summerville, A., & Roese, N. J. (2008). Praise for regret: People value regret above other negative emotions. *Motivation and emotion*, 32(1), 46–54. doi:10.1007/s11031-008-9082-4
- Sansone, R. A., & Sansone, L. A. (2010). Gratitude and well being: the benefits of appreciation. *Psychiatry*, 7(11), 18–22.
- Sartre, J. P. (1984). *Being and nothingness*. (H. E. Barnes, Trans.) New York, NY: Washington Square Press. (Original work published 1943.)
- Schneider, K. J., & Krug, O. T. (2010). *Existential-humanistic therapy*. Washington, DC: American Psychological Association.
- Schnell, T. (2009). The sources of meaning and meaning in life questionnaire (SoMe): Relations to demographics and well-being. *The Journal of Positive Psychology*, 4(6), 483-499. doi: 10.1080/17439760903271074
- Schnell, T. (2011). Individual differences in meaning-making: Considering the variety of sources of meaning, their density and diversity. *Personality and Individual Differences*, 51(5), 667-673. doi:10.1016/j.paid.2011.06.006
- Schueller, S. M. (2010). Preferences for positive psychology exercises. *The Journal of Positive Psychology*, 5, 192-203. doi: 10.1080/17439761003790948
- Schumacher, B. N. (2010). *Death and Mortality in Contemporary Philosophy*. Cambridge University Press: Kindle Edition.
- Seligman, M. E. P. (1990). *Learned optimism*. New York: Pocket Books.

- Seligman, M. E. P. (1999). The president's address. *American Psychologist*, 53, 559–562.
- Seligman, M.E.P. (2002). *Authentic happiness*. New York, NY: Free Press.
- Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and well-being*. New York, NY: Free Press.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2014). Positive psychology: An introduction. In M. Csikszentmihalyi (Ed.), *Flow and the foundations of positive psychology* (pp. 279-298). Springer, Dordrecht. doi: 10.1007/978-94-017-9088-8
- Seligman, M. E. P., Railton, P., Baumeister, R.F., Sripada, C. (2013). Navigating into the future or driven by the past. *Perspectives on Psychological Science*, 8, 119-141. doi: 10.1177/1745691612474317
- Seligman, M. E. P., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist*, 60, 410–421. doi: 10.1037/0003-066X.60.5.410
- Seneca, L. A., (1997). *On the shortness of life*. New York, New York: Penguin Group.
- Seto, E., & Schlegel, R. J. (2018). Becoming your true self: Perceptions of authenticity across the lifespan. *Self and Identity*, 17(3), 310–326. doi:10.1080/15298868.2017.1322530
- Sharif, M., Mogilner, C., & Hershfield, H. (2018, November 15). The effects of being time poor and time rich on life satisfaction. *SSRN*. Retrieved from <http://dx.doi.org/10.2139/ssrn.3285436> doi:10.2139/ssrn.3285436
- Shakespeare, W. (1992). *Hamlet, prince of Denmark*. In C. Watts & K. Carabine (Eds.), Ware, England: Wordsworth Editions. (Original work published 1599.)
- Sheldon, K. M., & King, L. (2001). Why positive psychology is necessary. *American Psychologist*, 56, 216-217. doi: 10.1037/0003-066X.56.3.216

- Sheldon, K. M., & Lyubomirsky, S. (2012). The challenge of staying happier: Testing the hedonic adaptation prevention model. *Personality and Social Psychology Bulletin*, 38(5), 670-680. doi: 10.1177/0146167212436400
- Shin, D., & Johnson, D. (1978). Avowed happiness as an overall assessment of the quality of life. *Social Indicators Research*, 5(1), 475-492. doi: 10.1007/BF00352944
- Shirom, A. (2007). Explaining vigor: on the antecedents and consequences of vigor as a positive affect at work. In D. L. Nelson & C. L. Cooper (Eds.), *Positive organizational behavior* (pp. 86-100). London: SAGE Publications Ltd. doi: 10.4135/9781446212752.n7
- Silvia, P. J. (2008). Interest—The curious emotion. *Current directions in psychological science*, 17(1), 57-60. doi: 10.1111/j.1467-8721.2008.00548.x
- Simpson, T.R. (2019, June 26). Where is Elvis Presley buried? *Liveaboutdotcom*. Retrieved from <https://www.liveabout.com/where-is-elvis-presley-buried-2321464>
- Singh, R. R. (2016). *Death, contemplation and Schopenhauer*. New York, NY: Routledge.
- Skelly, M. J. (2014). *The uses of excess in visual and material culture, 1600-2010*. Burlington, VT: Ashgate Publishing, Ltd.
- Slavin, M. (2016). Relational psychoanalysis and the tragic-existential aspect of the human condition. *Psychoanalytic Dialogues*, 26(5), 537-548. doi:10.1080/10481885.2016.1214465
- Smith, E. E. (2017). *The power of meaning: Finding fulfillment in a world obsessed with happiness*. New York, NY: Crown.
- Smith, J. Y. (1981, May 19). William Saroyan dies at 72. *The Washington Post*. Retrieved from <https://www.washingtonpost.com/archive/local/1981/05/19/william-saroyan-dies-at-72/5cad502d-8aca-478d-a53a-9d6156d841ab/>

- Solomon, S., Greenberg, J., & Pyszczynski, T. A. (2015). *The worm at the core: On the role of death in life*. New York, NY: Random House.
- Spiegel, D. (2015). Existential psychotherapy for patients with advanced cancer: Facing the future and the past. *Journal of Clinical Oncology*, 33(24), 2713-2714.
doi:10.1200/JCO.2015.62.2365
- Spreitzer, G., Sutcliffe, K., Dutton, J., Sonenshein, S., & Grant, A. (2005). A socially embedded model of thriving at work. *Organization science: A journal of the institute of management sciences*, 16(5), 537–549. doi:10.1287/orsc.1050.0153
- Spreitzer, G. M., Lam, C. F., & Fritz, C. (2010). Engagement and human thriving: Complementary perspectives on energy and connections to work. *Work engagement: A handbook of essential theory and research*, 132-146.
- Steger, M. (2012). Experiencing meaning in life: Optimal functioning at the nexus of well-being, psychopathology and spirituality. In P. T. P. Wong (Ed.), *The human quest for meaning* (2nd ed., pp.125-142). New York, NY: Routledge.
- Stewart, J. (2017, December 19). 100 gigantic skulls spill through the vast halls of a museum. *My modern met*. Retrieved from <https://mymodernmet.com/ron-mueck-mass-skull-sculptures/>
- Stone, P. R. (2012). Dark tourism and significant other death: Towards a model of mortality mediation. *Annals of tourism research*, 39(3), 1565-1587. doi: 10.1016/j.annals.2012.04.007
- Strulik, H., & Vollmer, S. (2013). Long-run trends of human aging and longevity. *Journal of Population Economics*, 26(4), 1303-1323. doi:10.1007/s00148-012-0459-z

- Taylor, S. (1983). Adjustment to threatening events: A theory of cognitive adaptation. *The American Psychologist*, 38(11), 1161–1173. doi:10.1037/0003-066X.38.11.1161
- Taylor, S. E., & Brown, I. D. (1988). Illusions and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, 103(2), 193-210. doi: 10.1037/0033-2909.103.2.193
- Teasdale, J., & Chaskalson, M. (2011). How does mindfulness transform suffering? I: the nature and origins of dukkha. *Contemporary Buddhism*, 12(1), 89–102. doi:10.1080/14639947.2011.564824
- Tedeschi, R. G. & Calhoun, L.G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry*, 15, 1-18. doi: 10.1207/s15327965pli1501_01
- Thayer, R. E. (1996). *The origin of everyday moods: Managing energy, tension and stress*. New York: Oxford University Press.
- The Onion (1997, January 22). *Word death rate holding steady at 100 percent*. Retrieved from <https://www.theonion.com/world-death-rate-holding-steady-at-100-percent-1819564171>
- Thompson, H. S. (1997). *The proud highway: Saga of a desperate southern gentleman 1966-1967*. New York, NY: Ballantine.
- Tillich, P. (1952). *The courage to be*. London: Nisbet.
- Tolstoy, L. (1981). *The Death of Ivan Ilych*. New York, NY: Bantam Dell.
- Tomer, A. (1994). Death anxiety in the adult life. In R. A. Neimeyer (Ed.), *Death anxiety handbook* (pp. 3-23). Washington, DC: Taylor & Francis.
- Tomer, A. (2000). *Death attitudes and the older adult: Theories, concepts, and applications*. Philadelphia, PA: Brunner-Routledge.
- Townsend, C. (2008.) *Art and death*. New York: St. Martin's Press.

- Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. *Psychological Review*, 117(2), 440–463. doi:10.1037/a0018963
- Tversky, A., & Kahneman, D. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2), 263-291. doi: 10.2307/1914185
- U.S. Travel Association. (May 8, 2018.) *State of American Vacation 2018*. Retrieved from <https://www.ustravel.org/research/state-american-vacation-2018>
- Uysal, R., Satici, S. A., Satici, B., & Akin, A. (2014). Subjective vitality as mediator and moderator of the relationship between life satisfaction and subjective happiness. *Educational Sciences: Theory and Practice*, 14(2), 489-497.
- Vail, K. E., Juhl, J., Arndt, J., Vess, M., Routledge, C., & Rutjens, B. T. (2012). When death is good for life: Considering the positive trajectories of terror management. *Personality and Social Psychology Review*, 16(4), 303–329. doi:10.1177/1088868312440046
- Van Brussel, L., & Carpentier, N. (Eds.). (2014). *The social construction of death: Interdisciplinary perspectives*. New York, NY: Palgrave MacMillan.
- van Gogh, V. (1885-86). Head of a skeleton with a burning cigarette [online image]. Van Gogh Museum, Amsterdam. Retrieved from <https://web.archive.org/web/20120203071542/http://www.vangoghmuseum.nl/vgm/index.jsp?page=1628&collection=619&lang=en>
- Van Deurzen-Smith, E. (2012). *Existential counselling and psychotherapy in practice* (3rd ed.). London, England: Sage.
- van Osch, S., van den Hout, W., & Stiggelbout, A. (2006). Exploring the reference point in prospect theory: gambles for length of life. *Medical decision making: An international*

journal of the society for medical decision making, 26(4), 338–346.

doi:10.1177/0272989X06290484

van Tilburg, W. A. & Igou, E. R. (2012). On boredom: Lack of challenge and meaning as distinct boredom experiences. *Motivation and Emotion*, 36(2), 181-194.

doi:10.1007/s11031-011-9234-9

van Utrecht, A. (1642). Vanitas - still life with bouquet and skull [online image]. Wikimedia Commons. Retrieved from

https://commons.wikimedia.org/w/index.php?title=File:Adriaen_van_Utrecht-_Vanitas_-_Still_Life_with_Bouquet_and_Skull.JPG&oldid=353900537.

Vos, J. (2018). Death in existential therapies: A critical review. In R. E. Menzies, R. G. Menzies, & L. Iverach (Eds.), *Curing the dread of death: Theory, research and practice* (pp. 145–166). Samford Valley, QLD: Australian Academic Press.

Vos, J., Craig, M., & Cooper, M. (2015). Existential therapies: A meta-analysis of their effects on psychological outcomes. *Journal of Consulting and Clinical Psychology*, 83(1), 115–128. doi:10.1037/a0037167

Vos, J., & Vitali, D. (2018). The effects of psychological meaning-centered therapies on quality of life and psychological stress: A metaanalysis. *Palliative & supportive care*, 16(5), 608–632. doi: 10.1017/S1478951517000931

Wade-Benzoni, K. A., Tost, L. P., Hernandez, M., & Larrick, R. P. (2012). It's only a matter of time: Death, legacies, and intergenerational decisions. *Psychological Science*, 23(7), 704–709. doi:10.1177/0956797612443967

Wadlington, W. (2012). The art of living in Otto Rank's will therapy. *The American Journal of Psychoanalysis*, 72(4), 382-396. doi: 10.1057/ajp.2012.25

- Walter, D. (2019, Autumn). Memento mori: a positive and contemporary reflection through visual art on a life spent well. *IAFOR Journal of Arts & Humanities*, 6(2), 107-120.
- Ware, B. (2012). *The top five regrets of the dying: A life transformed by the dearly departing*. Carlsbad, California: Hay House.
- Watkins, P. C., Van Gelder, M., & Frias, A. (2009). Furthering the science of gratitude. In R. Snyder & S. Lopez (Eds.), *The Oxford handbook of positive psychology* (2nd, pp. 437-446). New York: Oxford University Press.
- Watkins, P. C., Woodward, K., Stone, T., & Kolts, R. D. (2003). Gratitude and happiness: The development of a measure of gratitude and its relationship with subjective well-being. *Social Behavior and Personality*, 31(5), 431–452. doi: 10.2224/sbp.2003.31.5.431
- Watson, V. C., Cooper, M., McArthur, K., & McLeod, J. (2012). Helpful therapeutic processes: Client activities, therapist activities and helpful effects. *European Journal of Psychotherapy and Counselling*, 14(1), 77-89. Doi:10.1080/13642537.2012.652395
- Weisman, A. D. (1972). *On dying and denying: A psychiatric study of terminality*. New York: Behavioral Publications.
- Weissinger, E., Caldwell, L. L., & Bandalos, D. L. (1992). Relation between intrinsic motivation and boredom in leisure time. *Leisure Sciences*, 14(4), 317-325. doi: 10.1080/01490409209513177
- White, C. J., & Ralkowski, E. B. M. (2005). *Time and death: Heidegger's analysis of finitude*. Retrieved from <https://ebookcentral-proquest-com.proxy.library.upenn.edu>
- Williams, R. H. (1990). *The expression of common value attitudes toward suffering in the symbolism of medieval art*. New York, NY: Garland.

- Wilmoth, J. R., & Robine, J. M. (2003). The world trend in maximum life span. *Population and Development Review*, 29(1), 239-257.
- Wittkowski, J., Doka, K. J., Neimeyer, R. A., & Vallerger, M. (2015). Publication trends in thanatology: An analysis of leading journals. *Death Studies*, 39, 453–462.
doi:10.1080/07481187.2014.1000054
- Wong, P. T. P. (1989). Personal meaning and successful aging. *Canadian Psychology*, 30, 516–525.
- Wong, P. T. P. (2007). Meaning-management theory and death acceptance. In A. Tomer, G. T. Eliason, & P. T. P. Wong (Eds.), *Existential and spiritual issues in death attitudes* (pp. 65-87). New York, NY: Erlbaum.
- Wong, P. T. P. (2009). Meaning therapy: An integrative and positive existential psychotherapy. *Journal of Contemporary Psychotherapy*, 40, 85-93. doi:10.1007/s10879-009-9132-6
- Wong, P.T.P. (2010, July). What is existential positive psychology? *International Journal of Existential Psychology & Psychotherapy*, 3(1).
- Wong, P. T. P. (2013). Toward a dual-systems model of what makes life worth living. In P. T. P. Wong (Ed.), *The human quest for meaning: Theories, research, and applications* (2nd ed., pp. 3-22). New York, NY: Routledge.
- Wong, P. T. P. (2017). Meaning-centered approach to research and therapy, second wave positive psychology, and the future of humanistic psychology. *The Humanistic Psychologist*, 45(3), 207–216. doi:10.1037/hum0000062
- Wong, P. T. P., Reker, G. T., & Gesser, G. (1994). Death attitude profile-revised: A multidimensional measure of attitudes toward death. In R. A. Neimeyer (Ed.), *Death*

- anxiety handbook: Research, instrumentation, and application* (pp.121-148).
Washington, DC: Taylor & Francis.
- Wong, P. T. P., & Tomer, A. (2011). Beyond terror and denial: The positive psychology of death acceptance. *Death Studies*, 35(2), 99–106. doi:10.1080/07481187.2011.535377
- Xu J., Murphy S., Kochanek K., & Arias E. (2020, January). Mortality in the United States, 2018. *NCHS Data Brief, no 355*. Hyattsville, MD: National Center for Health Statistics.
- Yalom, I. D. (1980). *Existential psychotherapy*. New York, NY: HarperCollins.
- Yalom, I. D. (1989). *Love's executioner*. New York, NY: Basic Books.
- Yalom, I. D. (2008). *Staring at the sun: Overcoming the terror of death*. San Francisco, CA: Jossey-Bass.
- Yalom, I., & Josselson, R. (2014). Existential psychotherapy. *Current Psychotherapies*, 265-298.
- Yang, W., Staps, T., & Hijmans, E. (2010). Existential crisis and the awareness of dying: The role of meaning and spirituality. *OMEGA - Journal of Death and Dying*, 61(1), 53–69. doi:10.2190/OM.61.1.c